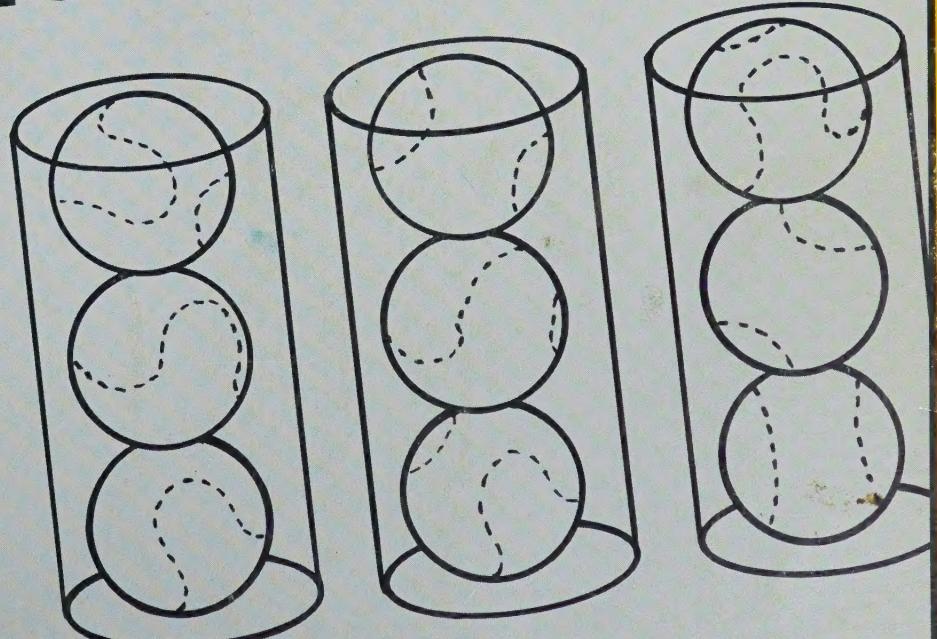


starting points in mathematics

4

Workbook Teacher's Edition

4. 3 tennis balls to
How many cans
tennis balls?



CURRICULUM

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To the Teacher

This workbook is designed to complement the *Mathematics 4 Revised*. For every unit there is a tab showing the corresponding textbook unit.

For almost every lesson there is a tab showing the corresponding textbook topics in the textbook. Most of these tabs correspond to required skills or concepts, or evaluative purposes.

The workbook also includes a full-page *Practice* tab for each unit. There is a full page of solving word problems. There are also lessons on word problems.

Students who are assigned to this workbook should be those who have completed the textbook or those who could profit from the review lessons. Review unit topics include mixed-computation word problem sets.

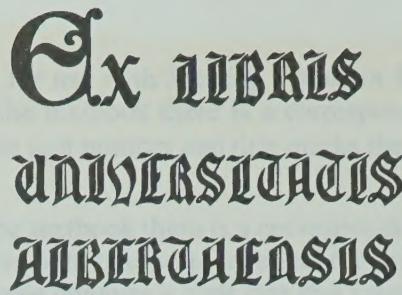
This Teacher's Edition differs from the student's workbook in that it includes these notes and exercise answers in red.

The following illustrates the structure of a lesson that corresponds to a textbook lesson.

1 Lesson title	2 Code line	3 Diagnostic/instruction
Matches title of corresponding textbook lesson	Textbook/Unit/Page	box
4 Completely-worked example	5 Partially-worked example	6 Decision exercises
7 Additional practice		Check students' understanding

NAME _____				
(2) SPM4/U3/64-65				
① Subtraction, Regrouping with Zeros				
Subtract.				
③ ④ $\begin{array}{r} 2110 \\ - 3000 \\ \hline 2863 \end{array}$ ⑤ $\begin{array}{r} 4950 \\ - 3298 \\ \hline \end{array}$ ⑥ $\begin{array}{r} 4000 \\ - 1374 \\ \hline \end{array}$ 4. $\begin{array}{r} 6030 \\ - 3165 \\ \hline \end{array}$ 5. $\begin{array}{r} \$7200 \\ - 426 \\ \hline \end{array}$				
⑦ 6. $\begin{array}{r} 6020 \\ - 2199 \\ \hline \end{array}$ 7. $\begin{array}{r} 1020 \\ - 586 \\ \hline \end{array}$ 8. $\begin{array}{r} 7000 \\ - 1032 \\ \hline \end{array}$ 9. $\begin{array}{r} 8101 \\ - 3717 \\ \hline \end{array}$ 10. $\begin{array}{r} \$904 \\ - 349 \\ \hline \end{array}$				
11. $\begin{array}{r} 8070 \\ - 5524 \\ \hline \end{array}$ 12. $\begin{array}{r} 8005 \\ - 4987 \\ \hline \end{array}$ 13. $\begin{array}{r} 502 \\ - 374 \\ \hline \end{array}$ 14. $\begin{array}{r} 9030 \\ - 5273 \\ \hline \end{array}$ 15. $\begin{array}{r} \$3050 \\ - 885 \\ \hline \end{array}$				

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Workbook for
starting points
in mathematics

Level 4

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Numbers to 999

Write the standard form for each.

<u>hundreds</u>	<u>tens</u>	<u>ones</u>	<u>hundreds</u>	<u>tens</u>	<u>ones</u>	<u>hundreds</u>	<u>tens</u>	<u>ones</u>
1. 2	8	6	286	2.	3	0	9	309
4. nine hundred four	904		5. four hundred seventy	470		6. eight hundred nineteen	819	

What does the 6 mean in each numeral?

7. 651 6 hundreds 8. 867 6 tens 9. 346 6 ones

Write the standard form for each.

<u>hundreds</u>	<u>tens</u>	<u>ones</u>	<u>hundreds</u>	<u>tens</u>	<u>ones</u>	<u>hundreds</u>	<u>tens</u>	<u>ones</u>			
10. 7	1	5	715	11. 8	9	7	897	12. 5	2	7	527
13. three hundred six	306		14. six hundred twenty-eight	628		15. two hundred thirty	230				

What does the 8 mean in each numeral?

16. 180 8 tens 17. 823 8 hundreds 18. 628 8 ones

Numbers to 9999

Write the standard form for each.

<u>th</u>	<u>h</u>	<u>t</u>	<u>o</u>	<u>th</u>	<u>h</u>	<u>t</u>	<u>o</u>
1. 1	7	3	5	1735	2. 4	0	5
3. one thousand four hundred ten	1410			4. two thousand sixty-eight	2068		

What does the 5 mean in each numeral?

5. 7514 5 hundreds 6. 5920 5 thousands 7. 6852 5 tens

Write the standard form for each.

<u>th</u>	<u>h</u>	<u>t</u>	<u>o</u>	<u>th</u>	<u>h</u>	<u>t</u>	<u>o</u>
8. 3	4	8	2	3482	9. 2	1	0
10. four thousand nine hundred one	4901			11. six thousand seventy	6070		
12. three thousand sixty-three	3063			13. five thousand five hundred twenty	5520		

What does the 7 mean in each numeral?

14. 6071 7 tens 15. 7352 7 thousands 16. 4751 7 hundreds 17. 9837 7 ones

Expanded Form

Write the expanded form for each.

1. 2641 $2000 + 600 + 40 + 1$

2. 3406 $3000 + 400 + 6$

3. 8567 $8000 + 500 + 60 + 7$

Write the standard form for each.

4. $5000 + 400 + 9$ 5409

5. $7000 + 40 + 8$ 7048

6. $9000 + 100 + 70$ 9170

Write the expanded form for each.

7. 1982 $1000 + 900 + 80 + 2$

8. 3460 $3000 + 400 + 60$

9. 6057 $6000 + 50 + 7$

10. 5103 $5000 + 100 + 3$

11. 3005 $3000 + 5$

12. 4649 $4000 + 600 + 40 + 9$

Write the standard form for each.

13. $4000 + 50 + 7$ 4057

14. $6000 + 200 + 8$ 6208

15. $3000 + 80$ 3080

16. $8000 + 300 + 60 + 7$ 8367

17. $7000 + 200 + 40$ 7240

18. $9000 + 100 + 30 + 8$ 9138

Comparing and Ordering Numbers

Use $>$ or $<$ to make a true statement.

1. 5346 $\underline{>}$ 5254

2. 6457 $\underline{>}$ 6257

3. 7756 $\underline{<}$ 7765

List from least to greatest.

4. 6434, 4634, 4463, 6443
4463, 4634, 6434, 6443

5. 1620, 1062, 1602, 1026
1026, 1062, 1602, 1620

6. 7544, 7464, 7458, 7446
7446, 7458, 7464, 7544

Use $>$ or $<$ to make a true statement.

7. 6767 $\underline{>}$ 6677

8. 8201 $\underline{<}$ 8210

9. 7936 $\underline{>}$ 7846

10. 9102 $\underline{>}$ 9101

11. 4001 $\underline{<}$ 4010

12. 4477 $\underline{<}$ 4747

List from least to greatest.

13. 8798, 8788, 8797, 8897
8788, 8797, 8798, 8897

14. 5795, 5579, 5600, 5759
5579, 5600, 5759, 5795

15. 3124, 1344, 3144, 3142
1344, 3124, 3142, 3144

16. 8608, 8606, 8060, 6806
6806, 8060, 8606, 8608

17. 2522, 2552, 255, 2525
255, 2522, 2525, 2552

18. 6090, 6900, 6099, 6009
6009, 6090, 6099, 6900

Rounding

Round to the nearest ten.

1. 24 20

2. 57 60

3. 82 80

4. 45 50

Round to the nearest hundred.

5. 562 600

6. 712 700

7. 393 400

8. 250 300

Round to the nearest thousand.

9. 8300 8000

10. 1829 2000

11. 7362 7000

12. 1500 2000

Round to the nearest ten.

13. 18 20

14. 84 80

15. 315 320

16. 197 200

Round to the nearest hundred.

17. 381 400

18. 693 700

19. 2449 2400

20. 1486 1500

Round to the nearest thousand.

21. 8300 8000

22. 1721 2000

23. 5500 6000

24. 2932 3000

Ordinal Numbers

Write using numerals.

1. six hundred fourth 604th

2. four hundred sixtieth

460th

3. eight hundred twenty-first

821st

Write the words.

4. 291st

two hundred ninety-first

5. 313th

three hundred thirteenth

6. 829th

eight hundred twenty-ninth

Write using numerals.

7. three hundred twentieth 320th8. nine hundred sixty-sixth 966th9. four hundred thirty-eighth 438th10. two hundred twelfth 212th11. five hundred seventy-second 572nd12. one hundred third 103rd

Write the words.

13. 945th nine hundred forty-fifth14. 818th eight hundred eighteenth15. 190th one hundred ninetieth16. 501st five hundred first

Numbers to 999 999

Write the standard form.

1. 83 thousand 526 83 526

3. sixty thousand six hundred five 60 605

5. $400\ 000 + 20\ 000 + 400$ 420 400

2. 399 thousand 15 399 015

4. seven hundred twenty thousand 720 000

6. $70\ 000 + 3\ 000 + 20 + 8$ 73 028

7. 118 thousand 118 000 8. 42 thousand 51 42 051 9. 262 thousand 110 262 110

10. five hundred eight thousand ten 508 010 11. two hundred thousand five 200 005

12. $100\ 000 + 6\ 000 + 200 + 5$ 106 205 13. $60\ 000 + 40 + 8$ 60 048

Write the words.

14. 32 800 thirty-two thousand eight hundred 15. 703 075 seven hundred three thousand seventy-five

What does the 7 mean in each numeral?

16. 127 614 7 thousands 17. 816 719 7 hundreds 18. 790 414 7 hundred thousands

Comparing and Ordering NumbersUse $>$ or $<$ to make a true statement.1. 527 533 $>$ 527 244 | 2. 612 667 $<$ 621 242 | 3. 64 259 $>$ 62 999

List from greatest to least.

4. 486 433, 48 888, 489 433, 499 433
499 433, 489 433, 486 433, 48 888 | 5. 84 829, 92 848, 94 809, 94 049
94 809, 94 049, 92 848, 84 829Use $>$ or $<$ to make a true statement.6. 968 753 $>$ 896 537 7. 699 705 $>$ 698 999 8. 854 499 $<$ 855 8999. 56 889 $>$ 54 899 10. 576 616 $>$ 576 529 11. 471 222 $>$ 417 777

List from greatest to least.

12. 45 678, 46 578, 46 875, 46 857
46 875, 46 857, 46 578, 45 678 | 13. 91 222, 912 022, 91 021, 91 212
912 022, 91 222, 91 212, 91 02114. 164 578, 16 475, 160 758, 164 597
164 597, 164 578, 160 758, 16 475 | 15. 328 634, 326 684, 328 464, 328 636
328 636, 328 634, 328 464, 326 684

Practice

Think of a place-value chart to help you answer these questions.

1. What does the 6 mean in 8654?

6 hundreds

2. What does the 3 mean in 43 806?

3 thousands

3. What does the 5 mean in 526 062?

5 one hundred thousands

4. What does the 9 mean in 293 568?

9 ten thousands

Write the standard form.

5. four hundred twenty-nine thousand one hundred sixty *429 160*

6. seven hundred eight thousand *708 000* 7. 2 thousands 3 tens 4 ones *2034*

8. $300\ 000 + 5\ 000 + 70 + 5$ *305 075* 9. 70 thousand 58 *70 058*

Write the expanded form.

10. 20 560 *20 000 + 500 + 60*

11. 709 300 *700 000 + 9000 + 300*

Write the words.

12. 38 380 *thirty-eight thousand three hundred eighty*

13. 470 074 *four hundred seventy thousand seventy-four*

Use > or < to make true statements.

14. 1918 *>* 1891

15. 73 450 *>* 73 054

16. 735 537 *<* 753 357

List from least to greatest.

17. 2338, 2383, 2838, 2333
2333, 2338, 2383, 2838

18. 140 705, 14 750, 14 075, 14 705
14 075, 14 705, 14 750, 140 705

List from greatest to least.

19. 4636, 4463, 4626, 4632
4636, 4632, 4626, 4463

20. 769 649, 796 497, 790 904, 796 967
796 967, 796 497, 790 904, 769 649

Round to the nearest ten.

21. 67 *70*

22. 3652 *3650*

23. 495 *500*

Round to the nearest hundred.

24. 815 *800*

25. 2748 *2700*

26. 49 350 *49 400*

Round to the nearest thousand.

27. 7600 *8000*

28. 14 450 *14 000*

29. 260 725 *261 000*

Roman Numerals

Write the standard form.

1. IX 9

2. XVI 16

3. XXIV 24

Write the Roman numeral.

4. 50 L

5. 94 XCIV

6. 59 LIX

Write the standard form.

7. XLV 45

8. VIII 8

9. XIII 13

10. LIX 59

11. LXXI 71

12. XC 90

13. LXXXVI 86

14. XXXVIII 38

15. LII 52

16. XCIX 99

17. XLVII 47

18. LXIV 64

Write the Roman numeral.

19. 14 XIV

20. 29 XXIX

21. 49 XLIX

22. 56 LVI

23. 67 LXVII

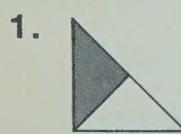
24. 78 LXXVIII

25. 85 LXXXV

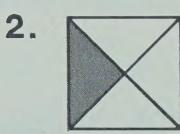
26. 9 IX

Fractions for Part of a Whole

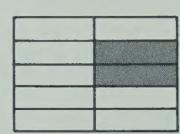
Write a fraction to show how much is shaded.



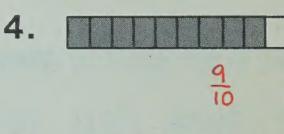
$\frac{1}{4}$



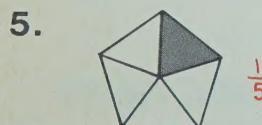
$\frac{1}{4}$



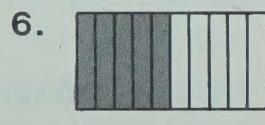
$\frac{2}{10}$



$\frac{9}{10}$



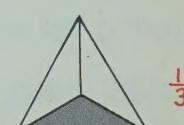
$\frac{1}{5}$



$\frac{5}{10}$



$\frac{3}{4}$



$\frac{1}{3}$

For each fraction, draw a picture. Show equal parts. Then shade to show the fraction.

Pictures will vary.

9. $\frac{7}{10}$ 7 of ten equal parts should be shaded.

10. $\frac{3}{5}$ 3 of 5 equal parts should be shaded.

11. $\frac{2}{4}$ 2 of 4 equal parts should be shaded.

12. $\frac{4}{5}$ 4 of 5 equal parts should be shaded.

13. $\frac{1}{2}$ 1 of 2 equal parts should be shaded.

14. $\frac{2}{5}$ 2 of 5 equal parts should be shaded.

15. $\frac{2}{3}$ 2 of 3 equal parts should be shaded.

16. $\frac{3}{10}$ 3 of 10 equal parts should be shaded.

Fractions for Part of a Set

Write a fraction to answer the question.

1. What fraction of the shapes are circles?



$$\frac{2}{3}$$

2. What fraction of the faces are smiling?



$$\frac{4}{5}$$

3. What fraction of the clowns have no hats?



$$\frac{2}{4}$$

4. What fraction of the bulbs are lit?



$$\frac{3}{10}$$

5. What fraction of the flowers have stems?



$$\frac{1}{3}$$

6. What fraction of the apples have leaves?



$$\frac{3}{4}$$

7. What fraction of the switches are "on"?



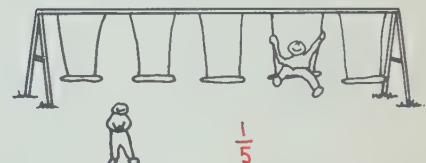
$$\frac{1}{2}$$

8. What fraction of the people have hats?



$$\frac{9}{10}$$

9. What fraction of the swings have children?



$$\frac{1}{5}$$

Draw a picture to show the fraction. Pictures will vary.

10. a group of faces,
 $\frac{2}{3}$ of which are happy

11. a group of stems,
 $\frac{3}{5}$ of which have flowers

12. a group of eggs,
 $\frac{1}{4}$ of which are cracked

13. a group of sticks,
 $\frac{7}{10}$ of which are straight

14. a group of people,
 $\frac{1}{2}$ of whom wear glasses

15. a group of shapes,
 $\frac{3}{5}$ of which are squares

Fractions Greater Than 1

Write a fraction to answer the question.

1. How many apples?



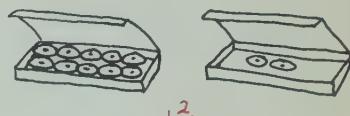
$$3\frac{1}{2}$$

2. How many pairs of skates?



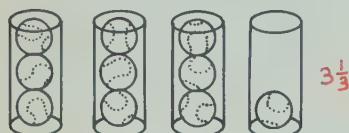
$$2\frac{1}{2}$$

3. 10 cookies to a box.
How many boxes of cookies?



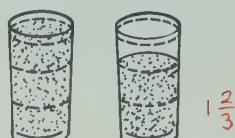
$$1\frac{2}{10}$$

4. 3 tennis balls to a can.
How many cans of tennis balls?



$$3\frac{1}{3}$$

5. How many glasses of juice?



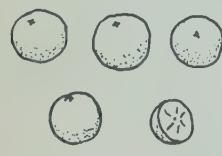
$$1\frac{2}{3}$$

6. 5 pens to a box.
How many boxes of pens?



$$1\frac{1}{5}$$

7. How many oranges?



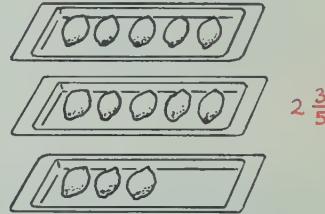
$$4\frac{1}{2}$$

8. 4 quarters to a stack.
How many stacks of quarters?



$$3\frac{1}{4}$$

9. 5 limes to a tray.
How many trays of limes?



$$2\frac{3}{5}$$

Draw a picture to show the amount. Pictures will vary.

10. $1\frac{1}{2}$ pairs of sneakers

11. $2\frac{1}{4}$ sandwiches

12. 10 markers to a box

$$5\frac{3}{10} \text{ boxes}$$

13. $2\frac{2}{3}$ bananas

14. $1\frac{4}{5}$ barrels
of rainwater

15. 4 players to a team.

$$3\frac{3}{4} \text{ teams}$$

NAME _____

Addition - Skills Warmup

Add.

$$\begin{array}{r} 1. \ 2 \\ 3 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 2. \ 6 \\ 0 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 3. \ 1 \\ 5 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 4. \ 4 \\ 2 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 5. \ 3 \\ 4 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 6. \ 0 \\ 7 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 7. \ 9 \\ 2 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 8. \ 5 \\ 7 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 9. \ 8 \\ 6 \\ \hline 14 \end{array}$$

$$\begin{array}{r} 10. \ 7 \\ 3 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 11. \ 7 \\ 9 \\ \hline 16 \end{array}$$

$$\begin{array}{r} 12. \ 3 \\ 8 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 13. \ 4 \\ 7 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 14. \ 5 \\ 9 \\ \hline 14 \end{array}$$

$$\begin{array}{r} 15. \ 8 \\ 8 \\ \hline 16 \end{array}$$

$$\begin{array}{r} 16. \ 6 \\ 4 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 17. \ 9 \\ 3 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 18. \ 8 \\ 5 \\ \hline 13 \end{array}$$

$$19. \ 7 + 6 \ 13$$

$$20. \ 8 + 2 \ 10$$

$$21. \ 9 + 8 \ 17$$

$$22. \ 6 + 5 \ 11$$

$$23. \ 4 + 9 \ 13$$

$$24. \ 8 + 7 \ 15$$

$$25. \ 9 + 6 \ 15$$

$$26. \ 4 + 8 \ 12$$

Subtraction - Skills Warmup

Subtract.

$$\begin{array}{r} 1. \ 8 \\ 7 \\ \hline 1 \end{array}$$

$$\begin{array}{r} 2. \ 6 \\ 2 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 3. \ 4 \\ 4 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 4. \ 3 \\ 1 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 5. \ 9 \\ 3 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 6. \ 3 \\ 0 \\ \hline 3 \end{array}$$

$$\begin{array}{r} 7. \ 13 \\ 9 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 8. \ 11 \\ 5 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 9. \ 15 \\ 7 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 10. \ 18 \\ 9 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 11. \ 12 \\ 3 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 12. \ 11 \\ 7 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 13. \ 10 \\ 9 \\ \hline 1 \end{array}$$

$$\begin{array}{r} 14. \ 10 \\ 3 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 15. \ 12 \\ 8 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 16. \ 14 \\ 9 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 17. \ 17 \\ 8 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 18. \ 11 \\ 8 \\ \hline 3 \end{array}$$

$$19. \ 10 - 4 \ 6$$

$$20. \ 13 - 6 \ 7$$

$$21. \ 14 - 7 \ 7$$

$$22. \ 16 - 9 \ 7$$

$$23. \ 15 - 6 \ 9$$

$$24. \ 13 - 5 \ 8$$

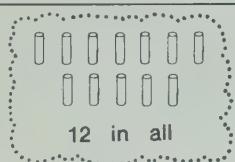
$$25. \ 12 - 7 \ 5$$

$$26. \ 14 - 6 \ 8$$

Addition, Basic Facts

Add.

1.
$$\begin{array}{r} 7 \\ + 5 \\ \hline 12 \end{array}$$



2.
$$\begin{array}{r} 3 \\ + 8 \\ \hline 11 \end{array}$$

3.
$$\begin{array}{r} 8 \\ + 7 \\ \hline 15 \end{array}$$

4. $2 + 5 = 7$

5. $7 + 9 = 16$

6.
$$\begin{array}{r} 5 \\ + 3 \\ \hline 8 \end{array}$$

7.
$$\begin{array}{r} 2 \\ + 7 \\ \hline 9 \end{array}$$

8.
$$\begin{array}{r} 6 \\ + 4 \\ \hline 10 \end{array}$$

9.
$$\begin{array}{r} 8 \\ + 9 \\ \hline 17 \end{array}$$

10.
$$\begin{array}{r} 6 \\ + 8 \\ \hline 14 \end{array}$$

11.
$$\begin{array}{r} 7 \\ + 3 \\ \hline 10 \end{array}$$

12.
$$\begin{array}{r} 4 \\ + 9 \\ \hline 13 \end{array}$$

13.
$$\begin{array}{r} 8 \\ + 8 \\ \hline 16 \end{array}$$

14.
$$\begin{array}{r} 9 \\ + 6 \\ \hline 15 \end{array}$$

15.
$$\begin{array}{r} 7 \\ + 6 \\ \hline 13 \end{array}$$

16.
$$\begin{array}{r} 6 \\ + 5 \\ \hline 11 \end{array}$$

17.
$$\begin{array}{r} 4 \\ + 8 \\ \hline 12 \end{array}$$

18. $3 + 6 = 9$

19. $4 + 4 = 8$

20. $8 + 5 = 13$

21. $2 + 9 = 11$

22. $7 + 7 = 14$

23. $8 + 2 = 10$

24. $0 + 9 = 9$

25. $9 + 5 = 14$

Addition, Regrouping Ones

Add.

1.
$$\begin{array}{r} 45 \\ + 37 \\ \hline 82 \end{array}$$

2.
$$\begin{array}{r} 24 \\ + 69 \\ \hline 93 \end{array}$$

3.
$$\begin{array}{r} 18 \\ + 62 \\ \hline 80 \end{array}$$

4. $26 + 36 = 62$

5.
$$\begin{array}{r} 58 \\ + 23 \\ \hline 81 \end{array}$$

6.
$$\begin{array}{r} 49 \\ + 35 \\ \hline 84 \end{array}$$

7.
$$\begin{array}{r} 65 \\ + 28 \\ \hline 93 \end{array}$$

8.
$$\begin{array}{r} 26 \\ + 45 \\ \hline 71 \end{array}$$

9.
$$\begin{array}{r} 47 \\ + 26 \\ \hline 73 \end{array}$$

10.
$$\begin{array}{r} 55 \\ + 36 \\ \hline 91 \end{array}$$

11.
$$\begin{array}{r} 16 \\ + 49 \\ \hline 65 \end{array}$$

12.
$$\begin{array}{r} 48 \\ + 47 \\ \hline 95 \end{array}$$

13.
$$\begin{array}{r} 34 \\ + 18 \\ \hline 52 \end{array}$$

14.
$$\begin{array}{r} 33 \\ + 19 \\ \hline 52 \end{array}$$

15. $45 + 49 = 94$

16. $22 + 19 = 41$

17. $37 + 38 = 75$

18. $57 + 34 = 91$

Addition, Regrouping Ones, Tens, or Hundreds

Add.

1.
$$\begin{array}{r} 271 \\ + 356 \\ \hline 627 \end{array}$$

2.
$$\begin{array}{r} 165 \\ + 329 \\ \hline 494 \end{array}$$

3.
$$\begin{array}{r} 325 \\ + 84 \\ \hline 409 \end{array}$$

4.
$$\begin{array}{r} 2854 \\ + 138 \\ \hline 2992 \end{array}$$

5.
$$\begin{array}{r} 4824 \\ + 1964 \\ \hline 6788 \end{array}$$

6.
$$\begin{array}{r} 363 \\ + 254 \\ \hline 617 \end{array}$$

7.
$$\begin{array}{r} 457 \\ + 72 \\ \hline 529 \end{array}$$

8.
$$\begin{array}{r} 1537 \\ + 59 \\ \hline 1596 \end{array}$$

9.
$$\begin{array}{r} 436 \\ + 236 \\ \hline 672 \end{array}$$

10.
$$\begin{array}{r} 2612 \\ + 2871 \\ \hline 5483 \end{array}$$

11.
$$\begin{array}{r} 181 \\ + 175 \\ \hline 356 \end{array}$$

12.
$$\begin{array}{r} 6941 \\ + 1234 \\ \hline 8175 \end{array}$$

13.
$$\begin{array}{r} 377 \\ + 181 \\ \hline 558 \end{array}$$

14.
$$\begin{array}{r} 228 \\ + 455 \\ \hline 683 \end{array}$$

15.
$$\begin{array}{r} 416 \\ + 243 \\ \hline 659 \end{array}$$

16.
$$\begin{array}{r} 5320 \\ + 1879 \\ \hline 7199 \end{array}$$

17.
$$\begin{array}{r} 6053 \\ + 2082 \\ \hline 8135 \end{array}$$

18.
$$\begin{array}{r} 129 \\ + 146 \\ \hline 275 \end{array}$$

19.
$$\begin{array}{r} 5024 \\ + 2759 \\ \hline 7783 \end{array}$$

20.
$$\begin{array}{r} 1490 \\ + 2193 \\ \hline 3683 \end{array}$$

Addition, Two or More Regroupings

Add.

1.
$$\begin{array}{r} 11 \\ 4398 \\ + 2567 \\ \hline 6965 \end{array}$$

2.
$$\begin{array}{r} 11 \\ 3528 \\ + 4739 \\ \hline 8267 \end{array}$$

3.
$$\begin{array}{r} 8437 \\ + 1167 \\ \hline 9604 \end{array}$$

4.
$$1629 + 2578 = 4207$$

5.
$$\begin{array}{r} 1525 \\ + 4482 \\ \hline 6007 \end{array}$$

6.
$$\begin{array}{r} 3289 \\ + 3669 \\ \hline 6958 \end{array}$$

7.
$$\begin{array}{r} 2637 \\ + 5628 \\ \hline 8265 \end{array}$$

8.
$$\begin{array}{r} 1574 \\ + 1564 \\ \hline 3138 \end{array}$$

9.
$$\begin{array}{r} 2149 \\ + 1785 \\ \hline 3934 \end{array}$$

10.
$$\begin{array}{r} 3648 \\ + 1475 \\ \hline 5123 \end{array}$$

11.
$$\begin{array}{r} 2468 \\ + 2098 \\ \hline 4566 \end{array}$$

12.
$$\begin{array}{r} 5645 \\ + 1839 \\ \hline 7484 \end{array}$$

13.
$$\begin{array}{r} 6784 \\ + 2549 \\ \hline 9333 \end{array}$$

14.
$$\begin{array}{r} 218 \\ + 493 \\ \hline 711 \end{array}$$

15.
$$\begin{array}{r} 187 + 5629 \\ \hline 5816 \end{array}$$

16.
$$\begin{array}{r} 5576 + 2647 \\ \hline 8223 \end{array}$$

17.
$$\begin{array}{r} 3932 + 1489 \\ \hline 5421 \end{array}$$

Practice

Add.

1.
$$\begin{array}{r} 7 \\ + 9 \\ \hline 16 \end{array}$$

2.
$$\begin{array}{r} 56 \\ + 31 \\ \hline 87 \end{array}$$

3.
$$\begin{array}{r} 438 \\ + 120 \\ \hline 558 \end{array}$$

4.
$$\begin{array}{r} 23 \\ + 74 \\ \hline 97 \end{array}$$

5.
$$\begin{array}{r} 23 \\ + 59 \\ \hline 82 \end{array}$$

6.
$$\begin{array}{r} 164 \\ + 72 \\ \hline 236 \end{array}$$

7.
$$\begin{array}{r} 636 \\ + 2612 \\ \hline 3248 \end{array}$$

8.
$$\begin{array}{r} 1459 \\ + 1713 \\ \hline 3172 \end{array}$$

9.
$$\begin{array}{r} 456 \\ + 761 \\ \hline 1217 \end{array}$$

10.
$$\begin{array}{r} 0 \\ + 7 \\ \hline 7 \end{array}$$

11.
$$\begin{array}{r} 754 + 878 \\ \hline 1632 \end{array}$$

12.
$$\begin{array}{r} 803 + 519 \\ \hline 1322 \end{array}$$

13.
$$\begin{array}{r} 1486 + 819 \\ \hline 2305 \end{array}$$

14.
$$\begin{array}{r} 8416 + 792 \\ \hline 9208 \end{array}$$

15.
$$\begin{array}{r} 697 + 3178 \\ \hline 3875 \end{array}$$

16.
$$\begin{array}{r} 2705 + 486 \\ \hline 3191 \end{array}$$

Solve. Show your work.

17. In an experiment, one beetle trap caught 78 beetles. Another caught 93. How many beetles did the two traps catch? **171**

19. Calgary sent 103 persons to the convention. Edmonton sent 98. Together, how many did the two cities send? **201**

21. The farm produced 2875 muskmelons and 4195 honeydew melons. How many melons did it produce in all? **7070**

18. The car show had 9 new models and 8 antiques. How many cars were in the show? **17**

20. 367 of the train passengers were going to Halifax. 195 were going to Dartmouth. How many were going to the two cities in all? **562**

22. The farmer sold the wheat crop for \$3550 and the oat crop for \$5875. For how much did the farmer sell the two crops in all? **\$9425**

Adding Three Numbers

Add.

1. $\begin{array}{r} 211 \\ 812 \\ 3564 \\ 2934 \\ \hline 7310 \end{array}$	2. $\begin{array}{r} 111 \\ 618 \\ 5074 \\ 973 \\ \hline 6665 \end{array}$	3. $\begin{array}{r} 4238 \\ 1934 \\ 829 \\ \hline 7001 \end{array}$	4. $\begin{array}{r} 379 + 4649 + 321 \\ \hline 5349 \end{array}$
---	--	--	---

5. $\begin{array}{r} 758 \\ 6433 \\ 524 \\ \hline 7715 \end{array}$	6. $\begin{array}{r} 5276 \\ 204 \\ 2985 \\ \hline 8465 \end{array}$	7. $\begin{array}{r} 4321 \\ 226 \\ 1357 \\ \hline 5904 \end{array}$	8. $\begin{array}{r} 3819 \\ 1257 \\ 4515 \\ \hline 9591 \end{array}$	9. $\begin{array}{r} 7682 \\ 1205 \\ 627 \\ \hline 9514 \end{array}$
---	--	--	---	--

10. $\begin{array}{r} 352 \\ 2258 \\ 2481 \\ \hline 5091 \end{array}$	11. $\begin{array}{r} 961 \\ 4282 \\ 2118 \\ \hline 7361 \end{array}$	12. $\begin{array}{r} 3249 \\ 1143 \\ 2668 \\ \hline 7060 \end{array}$	13. $\begin{array}{r} 698 \\ 715 \\ 2947 \\ \hline 4360 \end{array}$	14. $\begin{array}{r} 4645 \\ 321 \\ 736 \\ \hline 5702 \end{array}$
---	---	--	--	--

15.
$$\begin{array}{r} 357 + 6086 + 34 \\ \hline 6477 \end{array}$$
 16.
$$\begin{array}{r} 348 + 2858 + 4571 \\ \hline 7777 \end{array}$$

Practice

Solve. Show your work.

1. The farmer baled hay in three fields. One field gave 755 bales of hay. Another gave 862 bales. The third gave 516 bales. How many bales were there in all? **2133**
2. The counter on one turnstile showed 485. On the other turnstile, the counter showed 752. How many is this in all? **1237**
3. The car-carrier carried one car of 980 kg, another of 1084 kg, and a third of 1116 kg. How heavy were the three cars in all? **3180 kg**
4. In one day, the livestock broker bought 2000 cattle, 3500 hogs, and 700 sheep. How many head of livestock did the broker buy that day? **6200**

Estimating the Sum

First round and add to estimate the sum. Then find the exact sum.

$\begin{array}{r} \text{111} \\ 1. \quad 8256 \rightarrow 8300 \\ 572 \rightarrow 600 \\ 538 \rightarrow 500 \\ \hline 9366 \quad 9400 \end{array}$ <p><i>Estimate first.</i></p> <p><i>Then add.</i></p>	$\begin{array}{r} \text{112} \\ 2. \quad 1568 \rightarrow 2000 \\ 2895 \rightarrow 3000 \\ 1427 \rightarrow 1000 \\ \hline 5890 \quad 6000 \end{array}$ <p><i>Estimate first.</i></p> <p><i>Then add.</i></p>	$3. \quad 6789 + 362 + 801$ <p style="color: red;">7952</p>
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4.
$$\begin{array}{r} 4378 \\ 645 \\ 706 \\ \hline 5729 \end{array}$$

5.
$$\begin{array}{r} 3859 \\ 734 \\ 89 \\ \hline 4682 \end{array}$$

6.
$$\begin{array}{r} \$2334 \\ 4258 \\ 1769 \\ \hline \$8361 \end{array}$$

7.
$$\begin{array}{r} 493 \\ 858 \\ 2105 \\ \hline 3456 \end{array}$$

8.
$$\begin{array}{r} 3044 \\ 277 \\ 4086 \\ \hline 7407 \end{array}$$

9.
$$\begin{array}{r} \$813 \\ 732 \\ 660 \\ \hline \$2205 \end{array}$$

10.
$$\begin{array}{r} 1600 \\ 398 \\ 574 \\ \hline 2572 \end{array}$$

11.
$$\begin{array}{r} 7156 \\ 550 \\ 1232 \\ \hline 8938 \end{array}$$

12.
$$\begin{array}{r} \$2330 \\ 1895 \\ 2916 \\ \hline \$7141 \end{array}$$

13.
$$13. \quad 2789 + 752 + 903$$

4444

14.
$$14. \quad 824 + 778 + 624$$

2226

15.
$$15. \quad 2321 + 512 + 167$$

3000

16.
$$16. \quad 178 + 256 + 538$$

972

17.
$$17. \quad 109 + 378 + 325$$

812

18.
$$18. \quad 4025 + 1616 + 1396$$

7037

Practice

Add.

1.
$$\begin{array}{r} 45 \\ + 34 \\ \hline 79 \end{array}$$

2.
$$\begin{array}{r} 36 \\ + 52 \\ \hline 88 \end{array}$$

3.
$$\begin{array}{r} 314 \\ + 73 \\ \hline 387 \end{array}$$

4.
$$\begin{array}{r} 182 \\ + 615 \\ \hline 797 \end{array}$$

5.
$$\begin{array}{r} 2427 \\ + 1521 \\ \hline 3948 \end{array}$$

6.
$$\begin{array}{r} 34 \\ + 27 \\ \hline 61 \end{array}$$

7.
$$\begin{array}{r} 18 \\ + 24 \\ \hline 42 \end{array}$$

8.
$$\begin{array}{r} 532 \\ + 328 \\ \hline 860 \end{array}$$

9.
$$\begin{array}{r} 139 \\ + 44 \\ \hline 183 \end{array}$$

10.
$$\begin{array}{r} 605 \\ + 179 \\ \hline 784 \end{array}$$

11.
$$\begin{array}{r} 484 \\ + 62 \\ \hline 546 \end{array}$$

12.
$$\begin{array}{r} 463 \\ + 463 \\ \hline 926 \end{array}$$

13.
$$\begin{array}{r} 2907 \\ + 1342 \\ \hline 4249 \end{array}$$

14.
$$\begin{array}{r} 3231 \\ + 1688 \\ \hline 4919 \end{array}$$

15.
$$\begin{array}{r} 1826 \\ + 5333 \\ \hline 7159 \end{array}$$

16.
$$\begin{array}{r} 569 \\ + 257 \\ \hline 826 \end{array}$$

17.
$$\begin{array}{r} 195 \\ + 426 \\ \hline 621 \end{array}$$

18.
$$\begin{array}{r} 173 \\ + 389 \\ \hline 562 \end{array}$$

19.
$$\begin{array}{r} 2144 \\ + 916 \\ \hline 3060 \end{array}$$

20.
$$\begin{array}{r} 3280 \\ + 3728 \\ \hline 7008 \end{array}$$

21.
$$\begin{array}{r} 6066 \\ + 594 \\ \hline 6660 \end{array}$$

22.
$$\begin{array}{r} 2479 \\ + 2851 \\ \hline 5330 \end{array}$$

23.
$$\begin{array}{r} 5739 \\ + 2468 \\ \hline 8207 \end{array}$$

24.
$$\begin{array}{r} 5927 \\ + 1593 \\ \hline 7520 \end{array}$$

25.
$$\begin{array}{r} 4836 \\ + 2878 \\ \hline 7714 \end{array}$$

26.
$$\begin{array}{r} 34 \\ + 69 \\ \hline 22 \\ \hline 125 \end{array}$$

27.
$$\begin{array}{r} 357 \\ + 28 \\ \hline 180 \\ \hline 565 \end{array}$$

28.
$$\begin{array}{r} 457 \\ + 246 \\ \hline 68 \\ \hline 771 \end{array}$$

29.
$$\begin{array}{r} 4185 \\ + 389 \\ \hline 465 \\ \hline 5039 \end{array}$$

30.
$$\begin{array}{r} 1587 \\ + 3909 \\ \hline 2568 \\ \hline 8064 \end{array}$$

Solve. Show your work.

31. Mr. Griggs paid \$3585 for a used car and \$5578 for a used truck. How much did he pay in all? $\$9163$

32. In the video game, Shirley had scores of 2850, 3980, and 3730. What was her total score? 10560

33. The newstand sold 148 copies of the Sun and 195 copies of the Star. How many papers did it sell in all? 343

34. The mail room processed 576 envelopes and 67 packages one day. How many items did it process in all? 643

Subtraction, Basic Facts

Subtract.

1. $\begin{array}{r} 15 \\ - 7 \\ \hline 8 \end{array}$		2. $\begin{array}{r} 11 \\ - 5 \\ \hline 6 \end{array}$	3. $\begin{array}{r} 12 \\ - 8 \\ \hline 4 \end{array}$	4. $12 - 5 = 7$	5. $10 - 7 = 3$
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6. $\begin{array}{r} 8 \\ - 3 \\ \hline 5 \end{array}$	7. $\begin{array}{r} 10 \\ - 1 \\ \hline 9 \end{array}$	8. $\begin{array}{r} 13 \\ - 6 \\ \hline 7 \end{array}$	9. $\begin{array}{r} 17 \\ - 8 \\ \hline 9 \end{array}$	10. $\begin{array}{r} 16 \\ - 9 \\ \hline 7 \end{array}$	11. $\begin{array}{r} 18 \\ - 9 \\ \hline 9 \end{array}$
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12. $\begin{array}{r} 8 \\ - 6 \\ \hline 2 \end{array}$	13. $\begin{array}{r} 12 \\ - 3 \\ \hline 9 \end{array}$	14. $\begin{array}{r} 12 \\ - 6 \\ \hline 6 \end{array}$	15. $\begin{array}{r} 13 \\ - 9 \\ \hline 4 \end{array}$	16. $\begin{array}{r} 14 \\ - 5 \\ \hline 9 \end{array}$	17. $\begin{array}{r} 14 \\ - 8 \\ \hline 6 \end{array}$
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18. $9 - 6 = 3$	19. $11 - 7 = 4$	20. $16 - 8 = 8$	21. $10 - 4 = 6$
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22. $13 - 8 = 5$	23. $10 - 5 = 5$	24. $11 - 8 = 3$	25. $15 - 9 = 6$
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Subtraction, Regrouping Tens

Subtract.

1. $\begin{array}{r} 76 \\ - 27 \\ \hline 59 \end{array}$	2. $\begin{array}{r} 618 \\ - 49 \\ \hline 29 \end{array}$	3. $\begin{array}{r} 57 \\ - 38 \\ \hline 19 \end{array}$	4. $\begin{array}{r} 60 \\ - 29 \\ \hline 31 \end{array}$	5. $\begin{array}{r} 84 \\ - 17 \\ \hline 67 \end{array}$
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6. $\begin{array}{r} 80 \\ - 38 \\ \hline 42 \end{array}$	7. $\begin{array}{r} 82 \\ - 57 \\ \hline 25 \end{array}$	8. $\begin{array}{r} 71 \\ - 25 \\ \hline 46 \end{array}$	9. $\begin{array}{r} 52 \\ - 14 \\ \hline 38 \end{array}$	10. $\begin{array}{r} 60 \\ - 33 \\ \hline 27 \end{array}$
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11. $\begin{array}{r} 81 \\ - 49 \\ \hline 32 \end{array}$	12. $\begin{array}{r} 58 \\ - 42 \\ \hline 16 \end{array}$	13. $\begin{array}{r} 73 \\ - 34 \\ \hline 39 \end{array}$	14. $\begin{array}{r} 55 \\ - 27 \\ \hline 28 \end{array}$	15. $\begin{array}{r} 93 \\ - 45 \\ \hline 48 \end{array}$
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16. $42 - 29 = 13$	17. $91 - 34 = 57$	18. $81 - 68 = 13$
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Subtraction, Regrouping Tens, Hundreds, or Thousands

Subtract.

1. $\begin{array}{r} 613 \\ - 7358 \\ \hline 3616 \\ \hline 3742 \end{array}$	2. $\begin{array}{r} 413 \\ - 4537 \\ \hline 2046 \\ \hline 2491 \end{array}$	3. $\begin{array}{r} 6449 \\ - 2731 \\ \hline 3718 \end{array}$	4. $\begin{array}{r} 865 \\ - 372 \\ \hline 493 \end{array}$	5. $\begin{array}{r} 7066 \\ - 5242 \\ \hline 1824 \end{array}$
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6. $\begin{array}{r} 350 \\ - 135 \\ \hline 215 \end{array}$ 7. $\begin{array}{r} 3618 \\ - 241 \\ \hline 3377 \end{array}$ 8. $\begin{array}{r} 8273 \\ - 7312 \\ \hline 961 \end{array}$ 9. $\begin{array}{r} 7094 \\ - 6721 \\ \hline 373 \end{array}$ 10. $\begin{array}{r} 349 \\ - 153 \\ \hline 196 \end{array}$

11. $\begin{array}{r} 7855 \\ - 583 \\ \hline 7272 \end{array}$ 12. $\begin{array}{r} 991 \\ - 736 \\ \hline 255 \end{array}$ 13. $\begin{array}{r} 6228 \\ - 4907 \\ \hline 1321 \end{array}$ 14. $\begin{array}{r} 5939 \\ - 5489 \\ \hline 450 \end{array}$ 15. $\begin{array}{r} 5041 \\ - 2440 \\ \hline 2601 \end{array}$

Subtraction, Two or More Regroupings

Subtract.

1. $\begin{array}{r} 1112 \\ - 3236 \\ \hline 468 \\ \hline 2768 \end{array}$	2. $\begin{array}{r} 516 \\ - 6783 \\ \hline 4892 \\ \hline 1891 \end{array}$	3. $\begin{array}{r} 6474 \\ - 3546 \\ \hline 2928 \end{array}$	4. $\begin{array}{r} 8246 \\ - 6169 \\ \hline 2077 \end{array}$	5. $\begin{array}{r} 6180 \\ - 1284 \\ \hline 4896 \end{array}$
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6. $\begin{array}{r} 1060 \\ - 729 \\ \hline 331 \end{array}$ 7. $\begin{array}{r} 9616 \\ - 3852 \\ \hline 5764 \end{array}$ 8. $\begin{array}{r} 8382 \\ - 5934 \\ \hline 2448 \end{array}$ 9. $\begin{array}{r} 877 \\ - 298 \\ \hline 579 \end{array}$ 10. $\begin{array}{r} \$1420 \\ - 175 \\ \hline \$1245 \end{array}$

11. $\begin{array}{r} 9221 \\ - 689 \\ \hline 8532 \end{array}$ 12. $\begin{array}{r} 5347 \\ - 574 \\ \hline 4773 \end{array}$ 13. $\begin{array}{r} 5374 \\ - 3538 \\ \hline 1836 \end{array}$ 14. $\begin{array}{r} 5642 \\ - 1773 \\ \hline 3869 \end{array}$ 15. $\begin{array}{r} \$9408 \\ - 1432 \\ \hline \$7976 \end{array}$

16. $\begin{array}{r} 8495 \\ - 1956 \\ \hline 6539 \end{array}$ 17. $\begin{array}{r} 647 \\ - 589 \\ \hline 58 \end{array}$ 18. $\begin{array}{r} 7263 \\ - 373 \\ \hline 6890 \end{array}$ 19. $\begin{array}{r} 7104 \\ - 1162 \\ \hline 5942 \end{array}$ 20. $\begin{array}{r} \$722 \\ - 527 \\ \hline \$195 \end{array}$

Practice

Perform the indicated operation.

$$\begin{array}{r} 63 \\ -21 \\ \hline 42 \end{array}$$

$$\begin{array}{r} 69 \\ +48 \\ \hline 117 \end{array}$$

$$\begin{array}{r} 613 \\ -175 \\ \hline 438 \end{array}$$

$$\begin{array}{r} \$657 \\ +179 \\ \hline \$836 \end{array}$$

$$\begin{array}{r} 3406 \\ -1278 \\ \hline 2128 \end{array}$$

$$\begin{array}{r} 74 \\ 291 \\ +336 \\ \hline 701 \end{array}$$

$$\begin{array}{r} 493 \\ -228 \\ \hline 265 \end{array}$$

$$\begin{array}{r} 4112 \\ -1739 \\ \hline 2373 \end{array}$$

$$\begin{array}{r} 305 \\ 621 \\ +717 \\ \hline 1643 \end{array}$$

$$\begin{array}{r} \$148 \\ -79 \\ \hline \$69 \end{array}$$

$$11. 2072 - 1865 \\ \quad\quad\quad 207$$

$$12. 421 + 79 + 164 \\ \quad\quad\quad 664$$

$$13. \$227 - \$15 \\ \quad\quad\quad \$212$$

$$14. 300 - 163 \\ \quad\quad\quad 137$$

$$15. \$421 + \$43 + \$809 \\ \quad\quad\quad \$1273$$

$$16. 7324 - 3865 \\ \quad\quad\quad 3459$$

Solve. Show your work.

17. The base price for the new car is \$7350. Total cost for the extra features is \$2275. What is the price of the new car with the extra features? $\$9625$

18. Laurence filled the tank with 1350 L of water. During the night 285 L leaked out. How much was left? $1065 L$

19. The clinic treated 715 patients in November. Last November, it treated 478 patients. How many more patients were treated this November? 237

20. Marie-Louise saved \$135 last year and \$85 so far this year. She hopes to save \$90 more this year. If she does, how much will she have saved altogether? $\$310$

21. The fishing boat brought in 1750 kg of fish. By nightfall 688 kg had been sold. How much remained? 1062 kg

22. The new census shows that the town has grown by a total of 568 people. It used to have 4777 people. Now how many does it have? 5345

Subtraction, Regrouping with Zeros

Subtract.

1. $\begin{array}{r} 29910 \\ - 3000 \\ \hline 2863 \\ \hline 137 \end{array}$	2. $\begin{array}{r} 4910 \\ - 9500 \\ \hline 3298 \\ \hline 6202 \end{array}$	3. $\begin{array}{r} 4000 \\ - 1374 \\ \hline 2626 \end{array}$	4. $\begin{array}{r} 6030 \\ - 3165 \\ \hline 2865 \end{array}$	5. $\begin{array}{r} \$7200 \\ - 426 \\ \hline \$6774 \end{array}$
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6. 6020	7. 1020	8. 7000	9. 8101	10. $\$904$
$\begin{array}{r} 2199 \\ - 3821 \\ \hline \end{array}$	$\begin{array}{r} 586 \\ - 434 \\ \hline \end{array}$	$\begin{array}{r} 1032 \\ - 5968 \\ \hline \end{array}$	$\begin{array}{r} 3717 \\ - 4384 \\ \hline \end{array}$	$\begin{array}{r} 349 \\ - \$555 \\ \hline \end{array}$

11. 8070	12. 8005	13. 502	14. 9030	15. $\$3050$
$\begin{array}{r} 5524 \\ - 2546 \\ \hline \end{array}$	$\begin{array}{r} 4987 \\ - 3018 \\ \hline \end{array}$	$\begin{array}{r} 374 \\ - 128 \\ \hline \end{array}$	$\begin{array}{r} 5273 \\ - 3757 \\ \hline \end{array}$	$\begin{array}{r} 885 \\ - \$2165 \\ \hline \end{array}$

16. $\$602$	17. 9201	18. 8000	19. $\$8013$	20. $\$6008$
$\begin{array}{r} 405 \\ - \$197 \\ \hline \end{array}$	$\begin{array}{r} 2365 \\ - 6836 \\ \hline \end{array}$	$\begin{array}{r} 410 \\ - 7590 \\ \hline \end{array}$	$\begin{array}{r} 2987 \\ - \$5026 \\ \hline \end{array}$	$\begin{array}{r} 516 \\ - \$5492 \\ \hline \end{array}$

Practice

Solve. Show your work.

1. Indira is sorting the slides she has taken on her travels. She has a total of 1200 slides. 480 of these are from India. How many others does she have? **720**
2. The Shoe Store receives a shipment of shoes. 160 pairs are for girls. 132 pairs are for boys. 88 pairs are for adults. How many pairs did The Shoe Store receive? **380**
3. The clinic checked 308 children for eye problems. 283 passed the test. How many showed eye problems? **25**
4. Mrs. Taylor bought a television set for \$273, a table for \$89, and a lamp for \$56. Altogether, how much did she spend? **\$418**
5. The bulb was supposed to burn for at least 2000 h. It burned out after 775 h of use. How many hours fewer than 2000 is this? **1225**
6. Tuition for school is \$3000. Jed has already paid \$275. How much does he still owe? **\$2725**

Using Addition to Check Subtraction

Subtract. Add to check.

1. $\begin{array}{r} \overset{12}{\cancel{8}} \cancel{14} \\ \underline{- 578} \\ 356 \end{array}$	2. $\begin{array}{r} \overset{3}{\cancel{4}} \overset{10}{\cancel{0}} \\ \underline{- 261} \\ 144 \end{array}$	3. $\begin{array}{r} \$661 \\ - 475 \\ \hline \$186 \end{array}$	4. $\begin{array}{r} 82 \\ - 25 \\ \hline 57 \end{array}$
\checkmark	\checkmark		

5.
$$\begin{array}{r} 923 \\ - 289 \\ \hline 634 \end{array}$$

6.
$$\begin{array}{r} 77 \\ - 31 \\ \hline 46 \end{array}$$

7.
$$\begin{array}{r} 1036 \\ - 581 \\ \hline 455 \end{array}$$

8.
$$\begin{array}{r} \$7393 \\ - 4514 \\ \hline \$2879 \end{array}$$

9.
$$\begin{array}{r} 601 \\ - 269 \\ \hline 332 \end{array}$$

10.
$$\begin{array}{r} 9000 \\ - 6979 \\ \hline 2021 \end{array}$$

11.
$$\begin{array}{r} 867 \\ - 354 \\ \hline 513 \end{array}$$

12.
$$\begin{array}{r} \$8685 \\ - 7243 \\ \hline \$1442 \end{array}$$

13.
$$\begin{array}{r} 921 \\ - 23 \\ \hline 898 \end{array}$$

14.
$$\begin{array}{r} 101 \\ - 34 \\ \hline 67 \end{array}$$

15.
$$\begin{array}{r} \$5000 \\ - 2825 \\ \hline \$2175 \end{array}$$

16.
$$\begin{array}{r} 747 \\ - 368 \\ \hline 379 \end{array}$$

Addition and Subtraction Together

Perform the indicated operations. Work inside the parentheses first.
Show your work on other paper.

1. $(732 - 345) + 232 = 619$ $\begin{array}{r} \overset{12}{\cancel{7}} \overset{12}{\cancel{3}} \\ - 345 \\ \hline 387 \end{array}$	2. $732 - (345 + 232) = 155$ $\begin{array}{r} 345 \\ + 232 \\ \hline \end{array}$
3. $(5845 - 4963) - 351 = 531$	4. $5845 - (4963 + 351) = 531$

5. $(723 - 622) + 42 = 143$

6. $723 - (622 + 42) = 59$

7. $723 - (622 - 42) = 143$

8. $6946 - (4925 - 1147) = 3168$

9. $(6946 - 4925) - 1147 = 874$

10. $(6946 - 4925) + 1147 = 3168$

Practice

Perform the indicated operation.

$$\begin{array}{r} 421 \\ + 187 \\ \hline 608 \end{array}$$

$$\begin{array}{r} 703 \\ - 219 \\ \hline 484 \end{array}$$

$$\begin{array}{r} \$421 \\ 657 \\ + 273 \\ \hline \$1351 \end{array}$$

$$\begin{array}{r} 650 \\ 729 \\ + 333 \\ \hline 1712 \end{array}$$

$$\begin{array}{r} 1700 \\ - 848 \\ \hline 852 \end{array}$$

$$\begin{array}{r} 74 \\ + 86 \\ \hline 160 \end{array}$$

$$\begin{array}{r} 2001 \\ - 485 \\ \hline 1516 \end{array}$$

$$\begin{array}{r} 8807 \\ + 994 \\ \hline 9801 \end{array}$$

$$\begin{array}{r} 304 \\ - 37 \\ \hline 267 \end{array}$$

$$\begin{array}{r} 101 \\ - 16 \\ \hline 85 \end{array}$$

11. $(27 - 13) + 51$
65

12. $160 - (90 + 60)$
10

13. $1495 + (2700 - 1895)$
2300

14. $\$451 + \$360 + \$83$
\$894

15. $471 - (286 - 147)$
332

16. $488 + 376 + 542$
1406

Solve. Show your work.

17. Department A is allowed \$8000 for expenses. So far, it has spent \$3705. How much more can Department A spend? $\$4295$

18. The large tank holds 2210 L of corn oil. The small tank holds 1745 L. In all, how much corn oil do the two tanks hold? 3955 L

19. Tahir collects precious gems. He has 178 rubies, 275 emeralds, and 315 opals. Altogether, how many gems does he have? 768

20. The town issued 304 dog licences this year. Last year, it issued 287. How many more did it issue this year? 17

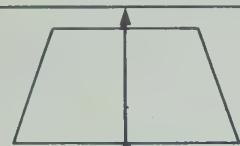
21. 2146 sheep on the ranch were rounded up for shearing. So far, only 750 have been shorn. How many are left to shear? 1396

22. The votes are in. There are 480 for Mr. Smith, 476 for Mr. Chen, and 509 for Mrs. Hindo. What is the total number of votes that were cast? 1465

Line Symmetry

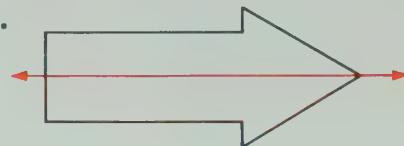
Draw a line of symmetry.

1.

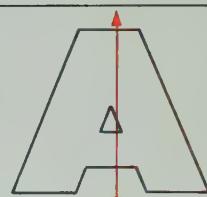


The two sides are alike.

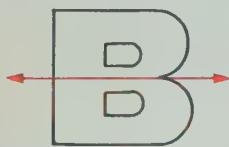
2.



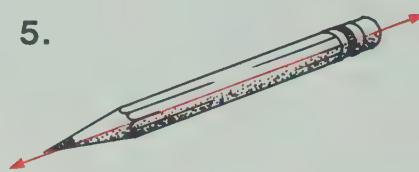
3.



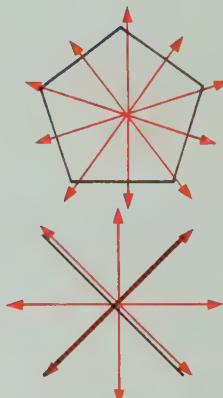
4.



5.

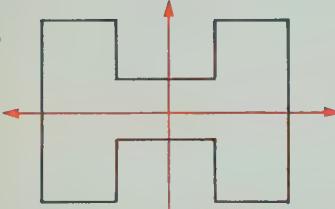


6.



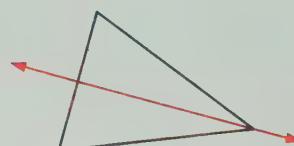
Any of the 5 lines is acceptable.

7.

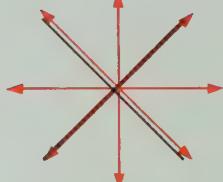


Either line is acceptable.

8.



9.

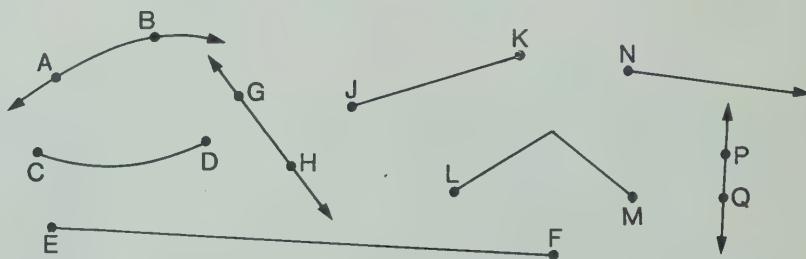


Any of the 4 lines is acceptable.

Lines and Line Segments

Name _____

1. all the lines shown.

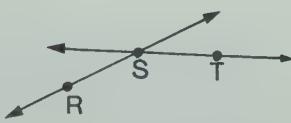
 \overleftrightarrow{GH} , \overleftrightarrow{PQ} 

2. all the line segments shown.

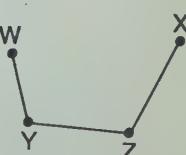
 \overline{EF} , \overline{JK}

Name _____

3. all the lines shown.

 \overleftrightarrow{RS} , \overleftrightarrow{ST} 

4. all the line segments shown.

 \overline{WY} , \overline{YZ} , \overline{ZX} 

Draw and label Pictures will vary.

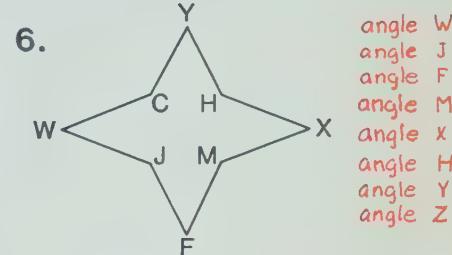
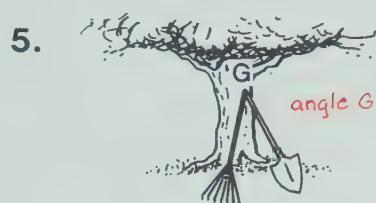
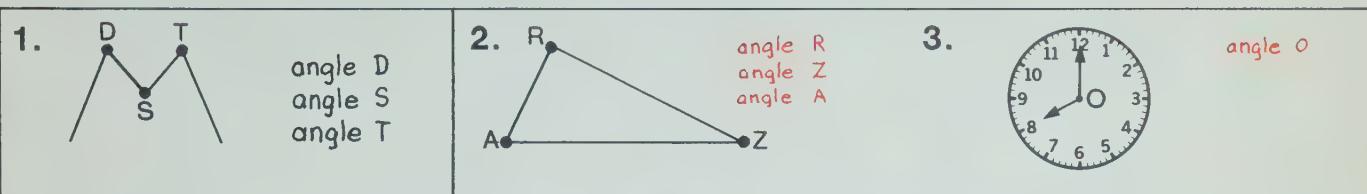
5. \overleftrightarrow{CN} .6. \overline{AD} .7. points P, Q, R, and \overleftrightarrow{PQ} and \overleftrightarrow{QR} .

Print

8. your first name
using only line segments. Answers will vary.

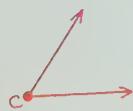
Angles

Name the angles suggested by each picture.

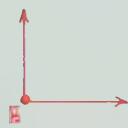


Draw and label these.

7. angle C smaller than a right angle



8. right angle B

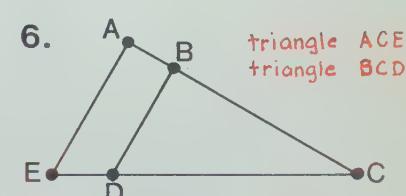
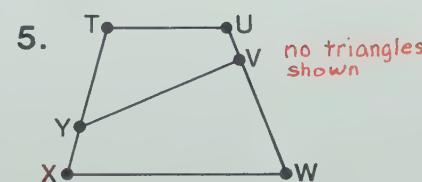
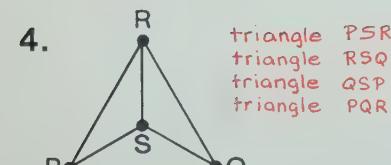
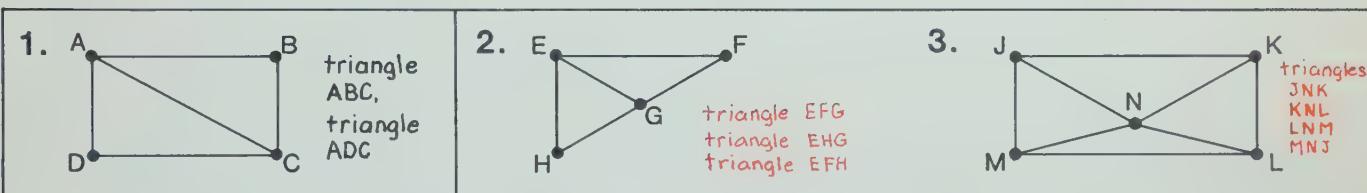


9. angle A larger than a right angle



Triangles

Name each triangle shown.



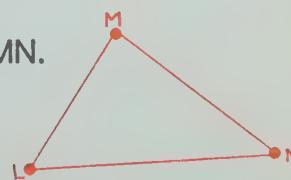
For the triangle shown,

Draw and label Pictures will vary.

7. name the angles.



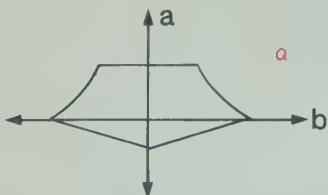
8. a triangle with sides LM and MN.



Practice

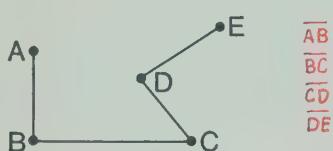
Which line is a line of symmetry?

1.



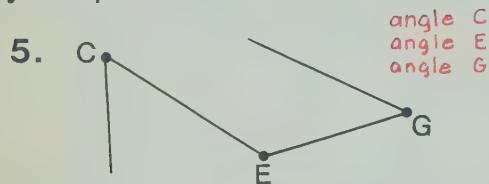
Name all the line segments shown.

3.



Name the angles suggested by this picture.

5.

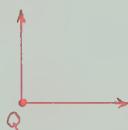
angle C
angle E
angle G

Draw and label these. Pictures will vary.

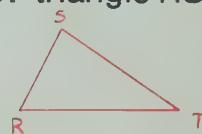
7. CW



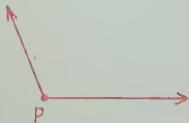
8. right angle Q

9. \overline{LN} 

10. triangle RST



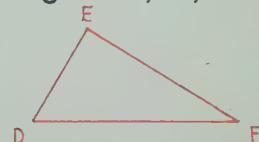
11. angle P larger than a right angle.



12. angle X smaller than a right angle.



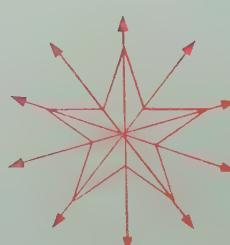
13. a triangle with angles D, E, and F.

Draw a picture for each of these.
Show a line of symmetry. Pictures will vary.

14. a bicycle tire

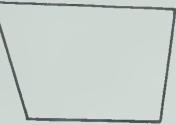
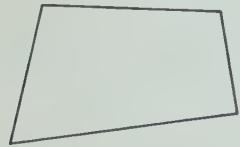
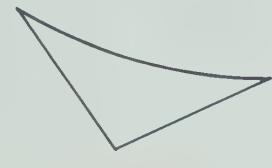
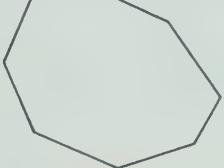
Any line containing the centre is a line of symmetry.

15. a star

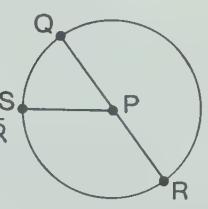
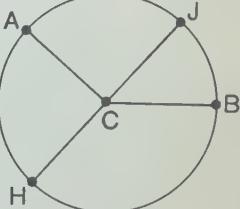


Polygons

Is it a polygon? If so, name the kind of polygon. Give the number of sides and the number of angles for each polygon.

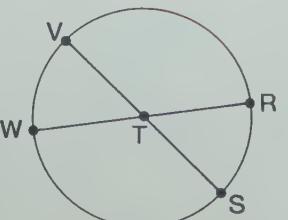
1. 	2. 	3. 	4. 
pentagon 5 sides 5 angles	quadrilateral 4 sides 4 angles	hexagon 6 sides 6 angles	not a polygon _____ sides _____ angles
5. 	6. 	7. 	8. 
quadrilateral 4 sides 4 angles	not a polygon _____ sides _____ angles	octagon 8 sides 8 angles	pentagon 5 sides 5 angles

Circles

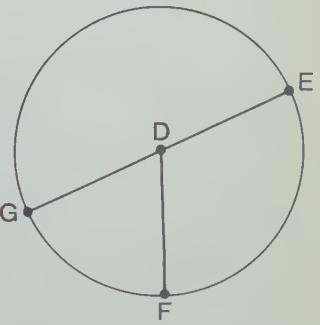
Name 1. the centre. P 2. each radius. \overline{PS} , \overline{PQ} , \overline{PR} 3. each diameter. \overline{QR} 	4. the centre. C 5. each radius. \overline{CA} , \overline{CB} , \overline{CH} , \overline{CJ} 6. each diameter. \overline{HJ} 
---	---

What is

7. the name of this shape? **circle**
8. T? **centre**
9. \overline{VS} ? **diameter**
10. \overline{TR} ? **radius**
11. \overline{WR} ? **diameter**

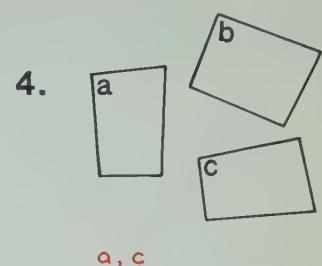
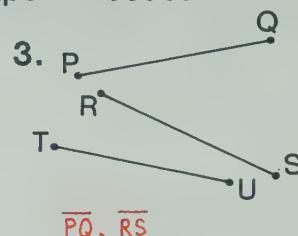
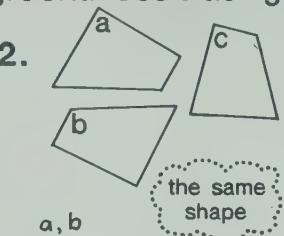
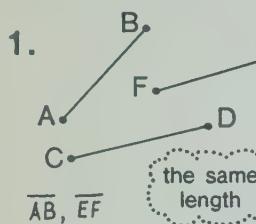


12. \overline{DF} ? **radius**
13. D? **centre**
14. \overline{DG} ? **radius**
15. \overline{GD} ? **radius**
16. \overline{EG} ? **diameter**

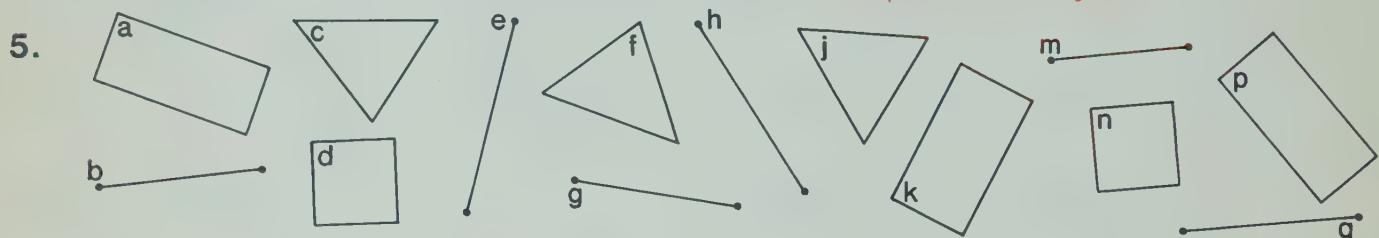


Congruent Shapes

Which shapes are congruent. Use tracing paper if needed.



Use tracing paper to find five pairs of congruent shapes. a,p c,f d,n b,g e,h



Solids

For each solid, give the number of vertices, edges, and faces.
Describe the faces.

1.



8 vertices 12 edges 6 faces

2 squares, 4 rectangles

2.



10 vertices 15 edges 7 faces

2 pentagons, 5 rectangles

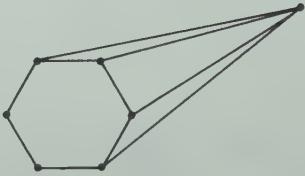
3.



6 vertices 9 edges 5 faces

2 triangles, 3 rectangles

4.



7 vertices 12 edges 7 faces

1 hexagon, 6 triangles

5. Use another sheet of paper. Patterns will vary.
Sketch a pattern for each solid shown above.

Practice

Perform the indicated operation.

1.
$$\begin{array}{r} 3004 \\ - 729 \\ \hline 2275 \end{array}$$

2.
$$\begin{array}{r} 605 \\ 293 \\ + 741 \\ \hline 1639 \end{array}$$

3.
$$\begin{array}{r} 163 \\ - 95 \\ \hline 68 \end{array}$$

4.
$$\begin{array}{r} \$721 \\ 483 \\ + 619 \\ \hline \$1823 \end{array}$$

5.
$$\begin{array}{r} \$427 \\ - 386 \\ \hline \$ 41 \end{array}$$

6.
$$\begin{array}{r} \$7914 \\ - 2088 \\ \hline \$5826 \end{array}$$

7.
$$\begin{array}{r} 1176 \\ - 849 \\ \hline 327 \end{array}$$

8.
$$\begin{array}{r} 3987 \\ + 123 \\ \hline 4110 \end{array}$$

9.
$$\begin{array}{r} \$17 \\ + 28 \\ \hline \$ 45 \end{array}$$

10.
$$\begin{array}{r} 1500 \\ - 585 \\ \hline 915 \end{array}$$

11.
$$420 + 806 + 993$$

$$\underline{\hspace{2cm} 2219}$$

12.
$$2716 - (1213 - 804)$$

$$\underline{\hspace{2cm} 2307}$$

13.
$$1741 + 869 + 74$$

$$\underline{\hspace{2cm} 2684}$$

14.
$$\$753 - \$201$$

$$\underline{\hspace{2cm} \$552}$$

15.
$$(210 - 90) - 30$$

$$\underline{\hspace{2cm} 90}$$

16.
$$210 - (90 - 30)$$

$$\underline{\hspace{2cm} 150}$$

Solve. Show your work.

17. Last Saturday the odometer on the car showed 4217 km. This Saturday it shows 5412 km. How far was the car driven this week? $\underline{\hspace{2cm} 1195 \text{ km}}$

18. The hospital has 336 beds. Only 71 are empty. How many patients are there? $\underline{\hspace{2cm} 265}$

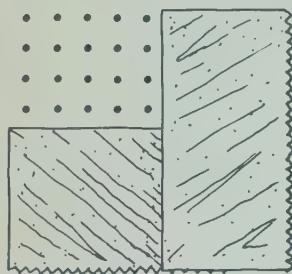
19. The Vanderlippe family was looking for a new car. They had \$2350 in the bank. The bank also promised a loan of up to \$5750. How much could they spend for the car? $\underline{\hspace{2cm} \$8100}$

20. When school opens in the fall, it will have 92, 117, and 89 students in each of its three grades. $\underline{\hspace{2cm} 298}$ Altogether, how many students will it have?

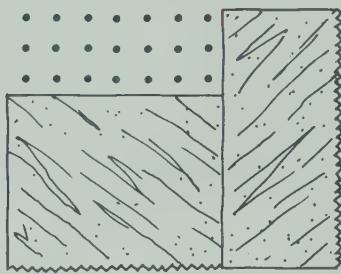
Basic Facts, One Factor to 5

Multiply.

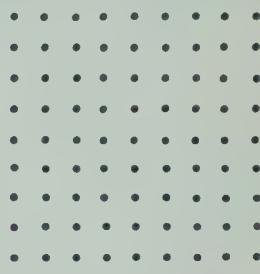
1. 4×5 20



2. 3×7 21



Cover as needed to help you find the products.



3. 6×4 24

4. 5×2 10

5. 2×9 18

6. 5×9 45

7. 7×3 21

8. 6×5 30

9. 3×5 15

10. 4×7 28

11. 7×2 14

12. 8×4 32

13. 5×7 35

14. 2×6 12

15. 8×5 40

16. 9×3 27

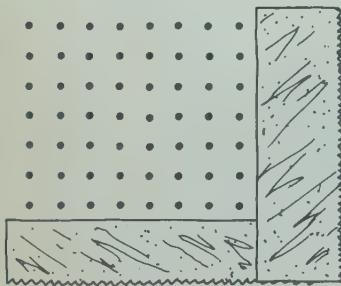
17. 3×8 24

18. 4×9 36

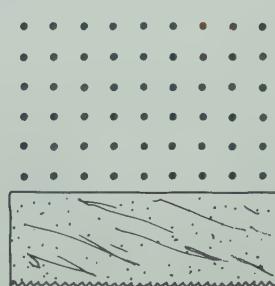
Finding Products with Factors from 0 to 9

Find each product.

1. 7×8 56



2. 6×9 54



Cover as needed to help you find the products.



3. 7×6 42

4. 8×9 72

5. 6×6 36

6. 4×3 12

7. 6×8 48

8. 6×3 18

9. 7×9 63

10. 5×5 25

11. 3×3 9

12. 7×7 49

13. 8×2 16

14. 8×8 64

15. 4×4 16

16. 8×7 56

17. 9×9 81

18. 9×6 54

A Table of Basic Multiplication Facts

The "5 times" Table

$5 \times 0 = 0$
$5 \times 1 = 5$
$5 \times 2 = 10$
$5 \times 3 = 15$
$5 \times 4 = 20$
$5 \times 5 = 25$
$5 \times 6 = 30$
$5 \times 7 = 35$
$5 \times 8 = 40$
$5 \times 9 = 45$

The "times 7" Table

$0 \times 7 = 0$
$1 \times 7 = 7$
$2 \times 7 = 14$
$3 \times 7 = 21$
$4 \times 7 = 28$
$5 \times 7 = 35$
$6 \times 7 = 42$
$7 \times 7 = 49$
$8 \times 7 = 56$
$9 \times 7 = 63$

The Multiplication Basic-Facts Table

x	0	1	2	3	4	5	6	7	8	9
0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9
2	0	2	4	6	8	10	12	14	16	18
3	0	3	6	9	12	15	18	21	24	27
4	0	4	8	12	16	20	24	28	32	36
5	0	5	10	15	20	25	30	35	40	45
6	0	6	12	18	24	30	36	42	48	54
7	0	7	14	21	28	35	42	49	56	63
8	0	8	16	24	32	40	48	56	64	72
9	0	9	18	27	36	45	54	63	72	81

On other paper, write the tables chosen by your teacher from these.

0 times 1 times 2 times 3 times 4 times 5 times 6 times 7 times 8 times 9 times
 times 0 times 1 times 2 times 3 times 4 times 5 times 6 times 7 times 8 times 9

When finished, use the Basic-Facts Table to check your work.

Finding the Missing Factor

Complete.

1. <u>5</u> $\times 4 = 20$	2. <u>3</u> $\times 8 = 24$	3. $5 \times \underline{\quad} = 35$
4. <u>4</u> $\times 2 = 8$	5. <u>9</u> $\times 5 = 45$	6. <u>3</u> $\times 6 = 18$
7. <u>7</u> $\times 3 = 21$	8. <u>8</u> $\times 7 = 56$	9. <u>8</u> $\times 4 = 32$
10. <u>4</u> $\times 9 = 36$	11. <u>4</u> $\times 7 = 28$	12. <u>9</u> $\times 8 = 72$
13. $6 \times \underline{7} = 42$	14. $2 \times \underline{8} = 16$	15. $4 \times \underline{6} = 24$
16. $3 \times \underline{4} = 12$	17. $5 \times \underline{5} = 25$	18. $7 \times \underline{9} = 63$
19. $6 \times \underline{8} = 48$	20. $9 \times \underline{2} = 18$	21. $8 \times \underline{5} = 40$
22. $3 \times \underline{9} = 27$	23. $9 \times \underline{9} = 81$	24. $6 \times \underline{9} = 54$

10 and Multiples of 10 as Factors

Multiply.

1. $4 \times 60 = 240$
 $4 \times 6 \text{ tens} = 24 \text{ tens}$

2. $8 \times 20 = 160$
 $8 \times 2 \text{ tens} = 16 \text{ tens}$

3. $7 \times 80 = 560$

4. $\begin{array}{r} \times | 40 \\ 6 | 240 \\ 7 | 280 \\ 3 | 120 \end{array}$

5. $3 \times 70 = 210$

6. $6 \times 50 = 300$

7. $5 \times 90 = 450$

8. $9 \times 60 = 540$

9. $\begin{array}{r} \times | 30 \\ 3 | 90 \\ 7 | 210 \\ 5 | 150 \\ 8 | 240 \\ 1 | 30 \\ 6 | 180 \end{array}$

10. $\begin{array}{r} \times | 90 \\ 7 | 630 \\ 9 | 810 \\ 6 | 540 \\ 4 | 360 \\ 0 | 0 \\ 8 | 720 \end{array}$

11. $\begin{array}{r} \times | 10 \quad 50 \quad 70 \quad 60 \quad 40 \quad 80 \\ 8 | 80 \quad 400 \quad 560 \quad 480 \quad 320 \quad 640 \end{array}$

 12. $\begin{array}{r} \times | 20 \quad 80 \quad 30 \quad 70 \quad 40 \quad 50 \\ 4 | 80 \quad 320 \quad 120 \quad 280 \quad 160 \quad 200 \end{array}$

 13. $\begin{array}{r} \times | 30 \quad 20 \quad 50 \quad 80 \quad 40 \quad 70 \\ 9 | 270 \quad 180 \quad 450 \quad 720 \quad 360 \quad 630 \end{array}$

Multiplying Two - Digit Numbers

Multiply.

1. 32
 $\begin{array}{r} 8 \\ \hline 16 \\ 240 \\ \hline 256 \end{array}$

2. 68
 $\begin{array}{r} 3 \\ \hline 24 \\ 180 \\ \hline 204 \end{array}$

3. 25
 $\begin{array}{r} 7 \\ \hline 175 \end{array}$

4. 19
 $\begin{array}{r} 4 \\ \hline 76 \end{array}$

5. 36
 $\begin{array}{r} 5 \\ \hline 180 \end{array}$

6. 47
 $\begin{array}{r} 3 \\ \hline 141 \end{array}$

7. 38
 $\begin{array}{r} 6 \\ \hline 228 \end{array}$

8. 25
 $\begin{array}{r} 9 \\ \hline 225 \end{array}$

9. 56
 $\begin{array}{r} 2 \\ \hline 112 \end{array}$

10. 84
 $\begin{array}{r} 7 \\ \hline 588 \end{array}$

11. 44
 $\begin{array}{r} 4 \\ \hline 176 \end{array}$

12. 79
 $\begin{array}{r} 8 \\ \hline 632 \end{array}$

13. 97
 $\begin{array}{r} 5 \\ \hline 485 \end{array}$

14. 64
 $\begin{array}{r} 9 \\ \hline 576 \end{array}$

15. 67
 $\begin{array}{r} 6 \\ \hline 402 \end{array}$

Practice

Perform the indicated operation.

1.
$$\begin{array}{r} 6042 \\ + 3759 \\ \hline 9801 \end{array}$$

2.
$$\begin{array}{r} \$42.16 \\ - 18.37 \\ \hline \$23.79 \end{array}$$

3.
$$\begin{array}{r} 7 \\ \times 8 \\ \hline 56 \end{array}$$

4.
$$\begin{array}{r} 97 \\ \times 5 \\ \hline 485 \end{array}$$

5.
$$\begin{array}{r} 2004 \\ - 738 \\ \hline 1266 \end{array}$$

6.
$$\begin{array}{r} 217 \\ 493 \\ + 816 \\ \hline 1526 \end{array}$$

7.
$$\begin{array}{r} 74 \\ \times 5 \\ \hline 370 \end{array}$$

8.
$$\begin{array}{r} 1170 \\ 5011 \\ + 2469 \\ \hline 8650 \end{array}$$

9.
$$\begin{array}{r} 3275 \\ - 1596 \\ \hline 1679 \end{array}$$

10.
$$\begin{array}{r} 9 \\ \times 6 \\ \hline 54 \end{array}$$

11. $4 \times 63 = 252$

12. $\$20.95 - \$4.77 = \$16.18$

13. $27 + 692 + 805 = 1524$

14. $1650 - 1171 = 479$

15. $7 \times 81 = 567$

16. $\$33.73 + \$16.85 = \$50.58$

Solve. Show your work.

17. One box contains 750 screws. Another has 575. A third has 475. How many screws are there in all? **1800**

18. Marta bought 6 packages of cheese. Each package holds 32 slices. How many slices are there in all? **192**

19. The thumbtack box holds 600 tacks when full. Now there are only 123 tacks in the box. How many tacks have been used? **477**

20. Food supplies for camp cost \$37.86. The first-aid kit cost \$17.95. What was the total cost for the food and first-aid kit? **\$55.81**

21. A carton holds 24 packages of cereal. Each package has 8 individual boxes. How many individual boxes are there in the carton? **192**

22. The flight out to the island was 270 km. The direct trip back was only 213 km. How much longer was the flight out? **57 km**

100 and Multiples of 100 as Factors

Multiply.

1. $5 \times 300 = 1500$
 5 x 3 hundreds
 = 15 hundreds

2. $4 \times 200 = 800$
 4 x 2 hundreds
 = 8 hundreds

3. $2 \times 700 = 1400$

4. $\begin{array}{r} x \quad | \quad 700 \\ 7 \quad | \quad 4900 \\ 4 \quad | \quad 2800 \\ 8 \quad | \quad 5600 \end{array}$

5. $3 \times 800 = 2400$

6. $4 \times 400 = 1600$

7. $7 \times 600 = 4200$

8. $8 \times 300 = 2400$

9. $\begin{array}{r} x \quad | \quad 900 \\ 6 \quad | \quad 5400 \\ 2 \quad | \quad 1800 \\ 7 \quad | \quad 6300 \\ 1 \quad | \quad 900 \\ 9 \quad | \quad 8100 \\ 4 \quad | \quad 3600 \end{array}$

10. $\begin{array}{r} x \quad | \quad 600 \\ 8 \quad | \quad 4800 \\ 0 \quad | \quad 0 \\ 5 \quad | \quad 3000 \\ 2 \quad | \quad 1200 \\ 4 \quad | \quad 2400 \\ 6 \quad | \quad 3600 \end{array}$

11. $\begin{array}{r} x \quad \quad 200 \quad 300 \quad 700 \quad 900 \quad 400 \quad 600 \\ 3 \quad \quad 600 \quad 900 \quad 2100 \quad 2700 \quad 1200 \quad 1800 \end{array}$
12. $\begin{array}{r} x \quad \quad 500 \quad 200 \quad 700 \quad 400 \quad 100 \quad 900 \\ 5 \quad \quad 2500 \quad 1000 \quad 3500 \quad 2000 \quad 500 \quad 4500 \end{array}$
13. $\begin{array}{r} x \quad \quad 400 \quad 100 \quad 800 \quad 200 \quad 900 \quad 500 \\ 8 \quad \quad 3200 \quad 800 \quad 6400 \quad 1600 \quad 7200 \quad 4000 \end{array}$

Multiplying Three - Digit Numbers

Multiply.

1. $\begin{array}{r} 438 \\ \times 3 \\ \hline 1314 \end{array}$

24 ← 3 x 8
 90 ← 3 x 30
 1200 ← 3 x 400

2. $\begin{array}{r} 267 \\ \times 5 \\ \hline 1335 \end{array}$

35 ← 5 x 7
 300 ← 5 x 60
 1000 ← 5 x 200

3. $\begin{array}{r} 517 \\ \times 3 \\ \hline 1551 \end{array}$

4. $\begin{array}{r} 384 \\ \times 4 \\ \hline 1536 \end{array}$

5. $\begin{array}{r} 736 \\ \times 2 \\ \hline 1472 \end{array}$

6. $\begin{array}{r} 684 \\ \times 6 \\ \hline 4104 \end{array}$

7. $\begin{array}{r} 562 \\ \times 9 \\ \hline 5058 \end{array}$

8. $\begin{array}{r} 794 \\ \times 7 \\ \hline 5558 \end{array}$

9. $\begin{array}{r} 185 \\ \times 8 \\ \hline 1480 \end{array}$

The Standard Form for Multiplication

Multiply. Use the standard form.

1. $\begin{array}{r} 36 \\ \times 4 \\ \hline 144 \end{array}$	2. $\begin{array}{r} 47 \\ \times 6 \\ \hline 282 \end{array}$	3. $\begin{array}{r} 68 \\ \times 3 \\ \hline 204 \end{array}$	4. $\begin{array}{r} 85 \\ \times 6 \\ \hline 510 \end{array}$	5. $\begin{array}{r} 16 \\ \times 7 \\ \hline 112 \end{array}$
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6. $\begin{array}{r} 59 \\ \times 2 \\ \hline 118 \end{array}$	7. $\begin{array}{r} 48 \\ \times 4 \\ \hline 192 \end{array}$	8. $\begin{array}{r} 80 \\ \times 8 \\ \hline 640 \end{array}$	9. $\begin{array}{r} 23 \\ \times 7 \\ \hline 161 \end{array}$	10. $\begin{array}{r} 73 \\ \times 9 \\ \hline 657 \end{array}$
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11. $\begin{array}{r} 375 \\ \times 8 \\ \hline 3000 \end{array}$	12. $\begin{array}{r} 485 \\ \times 5 \\ \hline 2425 \end{array}$	13. $\begin{array}{r} 408 \\ \times 7 \\ \hline 2856 \end{array}$	14. $\begin{array}{r} 917 \\ \times 4 \\ \hline 3668 \end{array}$	15. $\begin{array}{r} 861 \\ \times 9 \\ \hline 7749 \end{array}$
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16. $\begin{array}{r} 649 \\ \times 8 \\ \hline 5192 \end{array}$	17. $\begin{array}{r} 945 \\ \times 9 \\ \hline 8505 \end{array}$	18. $\begin{array}{r} 609 \\ \times 5 \\ \hline 3045 \end{array}$	19. $\begin{array}{r} 537 \\ \times 3 \\ \hline 1611 \end{array}$	20. $\begin{array}{r} 962 \\ \times 6 \\ \hline 5772 \end{array}$
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Multiplying Dollars and Cents

Multiply.

1. $\begin{array}{r} \$2.89 \\ \times 5 \\ \hline \$14.45 \end{array}$	2. $\begin{array}{r} \$6.13 \\ \times 7 \\ \hline \$42.91 \end{array}$	3. $\begin{array}{r} \$9.26 \\ \times 6 \\ \hline \$55.56 \end{array}$	4. $\begin{array}{r} \$1.48 \\ \times 4 \\ \hline \$5.92 \end{array}$	5. $\begin{array}{r} \$0.86 \\ \times 3 \\ \hline \$2.58 \end{array}$
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6. $\begin{array}{r} \$0.73 \\ \times 4 \\ \hline \$2.92 \end{array}$	7. $\begin{array}{r} \$7.39 \\ \times 3 \\ \hline \$22.17 \end{array}$	8. $\begin{array}{r} \$9.46 \\ \times 2 \\ \hline \$18.92 \end{array}$	9. $\begin{array}{r} \$5.34 \\ \times 5 \\ \hline \$26.70 \end{array}$	10. $\begin{array}{r} \$4.57 \\ \times 8 \\ \hline \$36.56 \end{array}$
---	--	--	--	---

11. $\begin{array}{r} \$7.34 \\ \times 6 \\ \hline \$44.04 \end{array}$	12. $\begin{array}{r} \$3.61 \\ \times 9 \\ \hline \$32.49 \end{array}$	13. $\begin{array}{r} \$0.49 \\ \times 7 \\ \hline \$3.43 \end{array}$	14. $\begin{array}{r} \$2.09 \\ \times 9 \\ \hline \$18.81 \end{array}$	15. $\begin{array}{r} \$0.12 \\ \times 8 \\ \hline \$0.96 \end{array}$
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More Than Two Factors

Multiply. Use other paper as needed.

 1. $6 \times 9 \times 4$ 216	 2. $4 \times 3 \times 7$ 84	3. $7 \times 2 \times 6$ 84 4. $2 \times 8 \times 3 \times 5$ 240
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5. $2 \times 3 \times 4$ 24

6. $5 \times 7 \times 7$ 245

7. $3 \times 4 \times 5$ 60

8. $1 \times 6 \times 5$ 30

9. $1 \times 4 \times 4 \times 6$ 96

10. $6 \times 0 \times 7$ 0

11. $8 \times 3 \times 9 \times 5$
1080

12. $2 \times 9 \times 1 \times 9$
162

13. $7 \times 1 \times 8 \times 2$
112

14. $3 \times 8 \times 4$ 96

15. $4 \times 3 \times 6 \times 6$
432

16. $7 \times 2 \times 5 \times 9$
630

Multiplication, Addition, and Subtraction TogetherPerform the indicated operations. Work inside the parentheses first.
Use other paper as needed.

1. $(67 + 44) \times 3$ 333 	2. $(81 \times 7) - 39$ 	3. $(81 \times 3) - 7$ 236 4. $(81 - 3) \times 7$ 546
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5. $(52 \times 7) - 160$
204

6. $394 + (260 \times 8)$
2474

7. $(394 + 260) \times 8$
5232

8. $(35 + 518) \times 3$
1659

9. $35 + (518 \times 3)$
1589

10. $(35 \times 3) + 518$
623

11. $3000 - (323 \times 3)$
2031

12. $52 \times (740 - 732)$
416

13. $(2001 - 643) \times 4$
5432

14. $200 \times (200 - 192)$
1600

15. $(438 \times 7) + 4387$
7453

16. $2005 - (238 \times 6)$
577

Practice

Perform the indicated operation.

1.
$$\begin{array}{r} \$41.63 \\ - 17.85 \\ \hline \$23.78 \end{array}$$

2.
$$\begin{array}{r} 200 \\ \times 7 \\ \hline 1400 \end{array}$$

3.
$$\begin{array}{r} 468 \\ 723 \\ + 845 \\ \hline 2036 \end{array}$$

4.
$$\begin{array}{r} 46 \\ \times 9 \\ \hline 414 \end{array}$$

5.
$$\begin{array}{r} \$4.37 \\ \times 5 \\ \hline \$21.85 \end{array}$$

6.
$$\begin{array}{r} 4391 \\ - 2435 \\ \hline 1956 \end{array}$$

7.
$$\begin{array}{r} 862 \\ \times 3 \\ \hline 2586 \end{array}$$

8.
$$\begin{array}{r} \$21.70 \\ 43.86 \\ + 24.81 \\ \hline \$90.37 \end{array}$$

9.
$$\begin{array}{r} \$1471 \\ - 896 \\ \hline \$ 575 \end{array}$$

10.
$$\begin{array}{r} 583 \\ \times 6 \\ \hline 3498 \end{array}$$

11. $\$20.07 - \8.68
 $\$11.39$

12. $3 \times 8 \times 7$
 168

13. $756 - (83 + 142)$
 531

14. $(12 - 7) \times 5$
 25

15. 10×8
 80

16. $(91 - 88) \times 148$
 444

Solve. Show your work.

17. Winifred is saving her \$1.75 allowance each week. How much will she have in 4 weeks? $\$7.00$

19. Rona was given \$50.00 to buy supplies for the office. Her purchases amounted to \$27.53. How much did she have to return to the office? $\$22.47$

21. Cupcakes come from the bakery, 2 in each package. A box contains 36 packages. A carton contains 6 boxes. How many cupcakes does a carton hold? 432

18. The film could be shown to 175 persons 4 times each hour. How many persons could see the film in 8 h? 5600

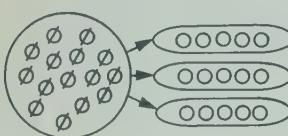
20. The builder charged \$47.50 for painting, \$23.60 for carpentry, and \$17.95 for materials. What was the total bill? $\$89.05$

22. 500 envelopes come in a box. Jon has 4 boxes. How many envelopes does Jon have? 2000

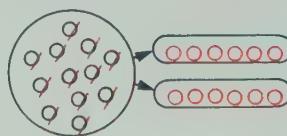
Sharing

Draw a picture and complete the division fact.

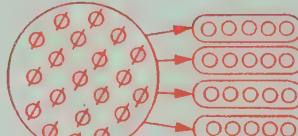
1. $15 \div 3 = 5$



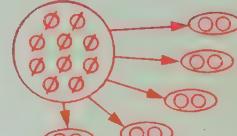
2. $12 \div 2 = 6$



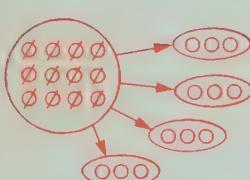
3. $20 \div 4 = 5$



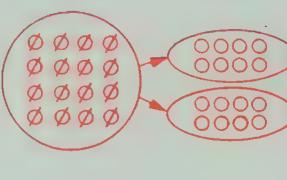
4. $10 \div 5 = 2$



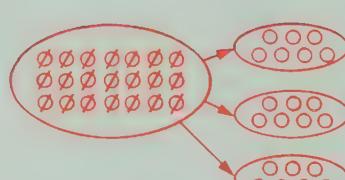
5. $12 \div 4 = 3$



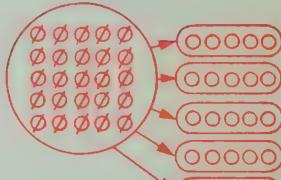
6. $16 \div 2 = 8$



7. $21 \div 3 = 7$



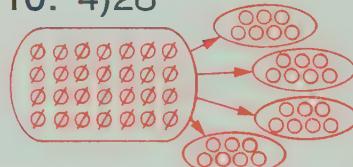
8. $25 \div 5 = 5$



9. $3\overline{)6}$



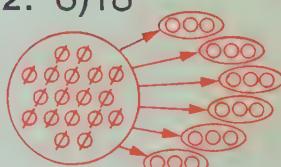
10. $4\overline{)28}$



11. $8\overline{)16}$

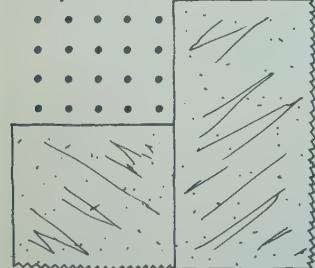


12. $6\overline{)18}$

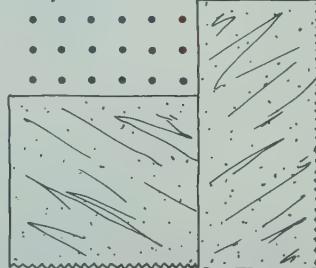
**Finding the Quotient**

Find the quotient.

1. $4\overline{)20}$



2. $3\overline{)18}$



Cover as needed to help you find the quotient.



3. $3\overline{)21}$

4. $5\overline{)30}$

5. $9\overline{)54}$

6. $6\overline{)24}$

7. $2\overline{)18}$

8. $7\overline{)42}$

9. $8\overline{)32}$

10. $3\overline{)12}$

11. $5\overline{)45}$

12. $9\overline{)27}$

13. $7\overline{)56}$

14. $6\overline{)48}$

15. $8\overline{)72}$

16. $4\overline{)28}$

17. $2\overline{)10}$

Related Multiplication and Division Facts

Write the complete family of facts for each group of numbers.

1. 5, 7, 35	2. 9, 4, 36	3. 6, 7, 42	4. 6, 8, 48
$5 \times 7 = 35$ $7 \times 5 = 35$ $35 \div 7 = 5$ $35 \div 5 = 7$	$9 \times 4 = 36$ $4 \times 9 = 36$ $36 \div 4 = 9$ $36 \div 9 = 4$	$6 \times 7 = 42$ $7 \times 6 = 42$ $42 \div 6 = 7$ $42 \div 7 = 6$	$6 \times 8 = 48$ $8 \times 6 = 48$ $48 \div 6 = 8$ $48 \div 8 = 6$

5. 5, 6, 30	6. 4, 7, 28	7. 8, 7, 56	8. 8, 3, 24
$5 \times 6 = 30$ $6 \times 5 = 30$ $30 \div 5 = 6$ $30 \div 6 = 5$	$4 \times 7 = 28$ $7 \times 4 = 28$ $28 \div 4 = 7$ $28 \div 7 = 4$	$8 \times 7 = 56$ $7 \times 8 = 56$ $56 \div 8 = 7$ $56 \div 7 = 8$	$8 \times 3 = 24$ $3 \times 8 = 24$ $24 \div 8 = 3$ $24 \div 3 = 8$
9. 9, 8, 72	10. 3, 6, 18	11. 4, 6, 24	12. 9, 5, 45
$9 \times 8 = 72$ $8 \times 9 = 72$ $72 \div 9 = 8$ $72 \div 8 = 9$	$3 \times 6 = 18$ $6 \times 3 = 18$ $18 \div 3 = 6$ $18 \div 6 = 3$	$4 \times 6 = 24$ $6 \times 4 = 24$ $24 \div 4 = 6$ $24 \div 6 = 4$	$9 \times 5 = 45$ $5 \times 9 = 45$ $45 \div 9 = 5$ $45 \div 5 = 9$

Using Multiplication to Divide

Divide. Show the multiplication fact you use.

1. $9 \overline{)36}^4$ $9 \times 4 = 36$	2. $7 \overline{)56}^8$ $7 \times \underline{8} = 56$	3. $4 \overline{)28}^7$	4. $2 \overline{)18}^9$	5. $6 \overline{)48}^8$
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6. $6 \overline{)24}^4$ 7. $7 \overline{)42}^6$ 8. $8 \overline{)32}^4$ 9. $5 \overline{)30}^6$ 10. $3 \overline{)12}^4$

11. $6 \overline{)12}^2$ 12. $9 \overline{)63}^7$ 13. $5 \overline{)40}^8$ 14. $7 \overline{)35}^5$ 15. $3 \overline{)24}^8$

16. $8 \overline{)64}^8$ 17. $2 \overline{)14}^7$ 18. $9 \overline{)54}^6$ 19. $5 \overline{)15}^3$ 20. $4 \overline{)16}^4$

Practice

Perform the indicated operation.

1.
$$\begin{array}{r} \$27.41 \\ + 56.32 \\ \hline \$83.73 \end{array}$$

2.
$$\begin{array}{r} 432 \\ \times 6 \\ \hline 2592 \end{array}$$

3.
$$\begin{array}{r} 1903 \\ + 5677 \\ \hline 7580 \end{array}$$

4.
$$7 \overline{) 56}^8$$

5.
$$\begin{array}{r} 38 \\ \times 7 \\ \hline 266 \end{array}$$

6.
$$\begin{array}{r} 2107 \\ - 485 \\ \hline 1622 \end{array}$$

7.
$$\begin{array}{r} \$10.03 \\ - 3.74 \\ \hline \$ 6.29 \end{array}$$

8.
$$9 \overline{) 72}^8$$

9.
$$\begin{array}{r} 6304 \\ 295 \\ + 1784 \\ \hline 8383 \end{array}$$

10.
$$\begin{array}{r} 500 \\ \times 3 \\ \hline 1500 \end{array}$$

11. $56 \div 7 = 8$

12. $\$402 - \$179 = \$223$

13. $7 \times 2 \times 5 \times 3 = 210$

14. $217 + 804 + 193 = 1214$

15. $3 \times 5 \times 2 \times 4 = 120$

16. $7 \times (140 - 88) = 364$

Solve. Show your work.

17. Manya's father won a contest at the grocery store. To claim the prize he had to answer this "skill-testing question." $4000 - (378 \times 6) + 982 = ?$ What is the correct answer? **750**

19. This summer the grain harvest at the MacLeod farm was 4294 kg. Last year it was only 3716 kg. How much larger is the crop this year? **578 kg**

21. The Lawry family car holds 54 L of gasoline. When Mrs. Lawry had it filled, it took 37 L. How many litres were already in it? **17**

18. The hardware company buys a case of light bulbs. The case holds 3 cartons. A carton holds 6 packages. Each package holds 4 bulbs. How many bulbs are in the case? **72**

20. Toby has 54 rabbits. He wants to put an equal number in each pen. He has 6 pens. How many rabbits should he put in each pen? **9**

22. Jean had \$87.16 in his savings account. The bank added \$5.88 interest. Now how much does he have? **\$93.04**

Finding the Number of Groups

Divide. Show the multiplication fact you use.

1. $4 \overline{)36}^9$

$4 \times 9 = 36$

2. $8 \overline{)56}^7$

$8 \times 7 = 56$

3. $7 \overline{)28}^4$

4. $9 \overline{)18}^2$

5. $8 \overline{)48}^6$

6. $4 \overline{)24}^6$

7. $6 \overline{)42}^7$

8. $4 \overline{)32}^8$

9. $6 \overline{)30}^5$

10. $4 \overline{)12}^3$

11. $2 \overline{)12}^6$

12. $7 \overline{)63}^9$

13. $8 \overline{)40}^5$

14. $5 \overline{)35}^7$

15. $8 \overline{)24}^3$

16. $6 \overline{)36}^6$

17. $7 \overline{)14}^2$

18. $6 \overline{)54}^9$

19. $3 \overline{)15}^5$

20. $7 \overline{)49}^7$

Extending the Division Facts

Divide.

1. $3 \overline{)150}^{50}$

$3 \times 50 = 150$

2. $5 \overline{)200}^{40}$

$5 \times 40 = 200$

3. $6 \overline{)180}^{30}$

4. $4 \overline{)160}^{40}$

5. $6 \overline{)300}^{50}$

6. $7 \overline{)210}^{30}$

7. $8 \overline{)480}^{60}$

8. $8 \overline{)320}^{40}$

9. $2 \overline{)120}^{60}$

10. $5 \overline{)350}^{70}$

11. $4 \overline{)280}^{70}$

12. $7 \overline{)420}^{60}$

13. $2 \overline{)180}^{90}$

14. $8 \overline{)640}^{80}$

15. $4 \overline{)360}^{90}$

16. $2 \overline{)60}^{30}$

17. $9 \overline{)630}^{70}$

18. $8 \overline{)160}^{20}$

19. $9 \overline{)810}^{90}$

20. $5 \overline{)400}^{80}$

Remainders

Divide. Show the quotient and the remainder.

$\begin{array}{r} 4 \text{ R } 2 \\ 9 \overline{) 38 } \\ \underline{36} \leftarrow 9 \times 4 \\ 2 \end{array}$	$\begin{array}{r} 5 \text{ R } 3 \\ 5 \overline{) 28 } \\ \underline{25} \leftarrow 5 \times 5 \\ 3 \end{array}$	$\begin{array}{r} 7 \text{ R } 4 \\ 8 \overline{) 60 } \\ \underline{56} \leftarrow 8 \times 7 \\ 4 \end{array}$	$\begin{array}{r} 5 \text{ R } 3 \\ 4 \overline{) 23 } \\ \underline{20} \leftarrow 4 \times 5 \\ 3 \end{array}$	$\begin{array}{r} 7 \text{ R } 3 \\ 7 \overline{) 52 } \\ \underline{49} \leftarrow 7 \times 7 \\ 3 \end{array}$
--	--	--	--	--

6. $8 \overline{) 26 } \quad 3 \text{ R } 2$

7. $9 \overline{) 58 } \quad 6 \text{ R } 4$

8. $3 \overline{) 20 } \quad 6 \text{ R } 2$

9. $6 \overline{) 38 } \quad 6 \text{ R } 2$

10. $4 \overline{) 19 } \quad 4 \text{ R } 3$

11. $7 \overline{) 41 } \quad 5 \text{ R } 6$

12. $3 \overline{) 28 } \quad 9 \text{ R } 1$

13. $2 \overline{) 11 } \quad 5 \text{ R } 1$

14. $8 \overline{) 63 } \quad 7 \text{ R } 7$

15. $4 \overline{) 30 } \quad 7 \text{ R } 2$

16. $8 \overline{) 19 } \quad 2 \text{ R } 3$

17. $2 \overline{) 15 } \quad 7 \text{ R } 1$

18. $9 \overline{) 26 } \quad 2 \text{ R } 8$

19. $6 \overline{) 53 } \quad 8 \text{ R } 5$

20. $5 \overline{) 49 } \quad 9 \text{ R } 4$

Practice

Solve. Show your work.

1. 3 persons agree to share equally a job of addressing 120 envelopes. How many will each have to address? *40*
2. If the Chens drive 125 km after lunch, they will cover 304 km today. How far have they gone already? *179 km*
3. The 54 recruits will be divided equally into 6 squads. How many will be in each squad? *9*
4. Ticket sales for the three performances of the play are \$36.75, \$29.15 and \$27.00. What is the total? *\$92.90*
5. Each student in the school volunteers to make 4 items for the Autumn Craft Sale. There are 168 students in the school. How many items will they make in all? *672*
6. The river splits into 2 branches. Each branch has 6 boathouses. Each boathouse has 7 boats. How many boats are there in all? *84*

Practice

Perform the indicated operation.

1.
$$\begin{array}{r} 3017 \\ - 486 \\ \hline 2531 \end{array}$$

2.
$$\begin{array}{r} \$2780 \\ 4216 \\ + 1539 \\ \hline \$8535 \end{array}$$

3.
$$\begin{array}{r} 435 \\ \times 7 \\ \hline 3045 \end{array}$$

4.
$$\begin{array}{r} 21 \\ \times 0 \\ \hline 0 \end{array}$$

5.
$$\begin{array}{r} \$16.25 \\ 43.93 \\ + 17.08 \\ \hline \$77.26 \end{array}$$

6.
$$\begin{array}{r} \$7.34 \\ \times 5 \\ \hline \$36.70 \end{array}$$

7.
$$\begin{array}{r} 70 \\ 9) 630 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 600 \\ \times 7 \\ \hline 4200 \end{array}$$

9.
$$\begin{array}{r} \$16.07 \\ - 3.21 \\ \hline \$12.86 \end{array}$$

10.
$$\begin{array}{r} 8 \\ 7) 56 \\ \hline \end{array}$$

11.
$$1238 - 715$$

$$\underline{523}$$

12.
$$(3 + 4) \times 412$$

$$\underline{2884}$$

13.
$$(17 \times 9) - 149$$

$$\underline{4}$$

14.
$$7 \times 3 \times 8 \times 2$$

$$\underline{336}$$

15.
$$86 + 419 + 307$$

$$\underline{812}$$

16.
$$(1335 + 1665) - 1536$$

$$\underline{1464}$$

Solve. Show your work.

17. The Pryor's bank account had \$7615 in it. They withdrew \$1955 to take a trip. How much does that leave in the account? $\$5660$

19. Raffle tickets come 10 in a book. Giovanni has sold 9 books. How many tickets has he sold? 90

21. When the tournament was postponed, the coach called 6 parents. Each parent called 6 more parents, each of whom called 6 more. In this way, how many were told of the postponement? 216

18. On one of its best days, Meg's business had \$5388 in direct sales and \$3574 in mail orders. What was the sales total for the day? $\$8962$

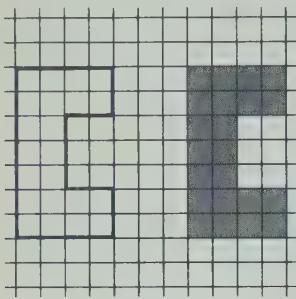
20. Vito solved the cube puzzle in 175 s. Angelo took 232 s. How much longer did Angelo take? 57 s

22. Diesel fuel needs for the farm were 3217 L in June, 3075 L in July, and 2871 L in August. How much fuel was used in all during the three months? 9163 L

Motions for Matching Congruent Shapes

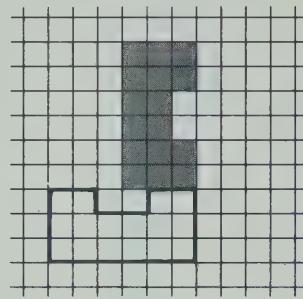
Use tracing paper. Tell whether you can slide, flip, or turn a tracing of the white shape to match the gray shape.

1.



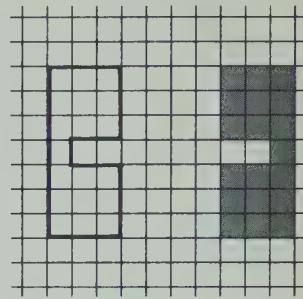
slide

2.



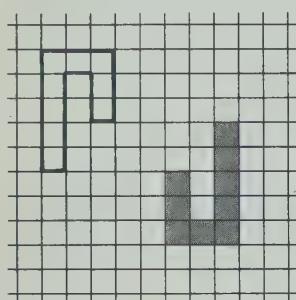
turn

3.



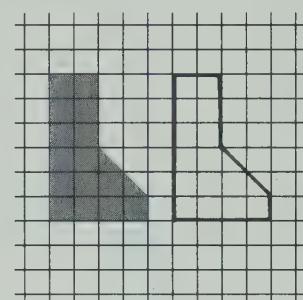
flip

4.



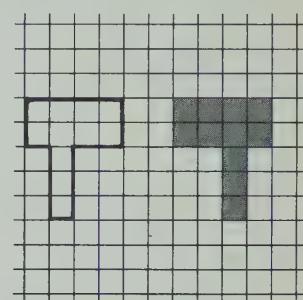
turn

5.



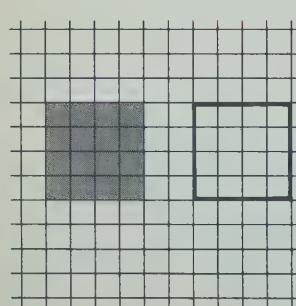
slide

6.



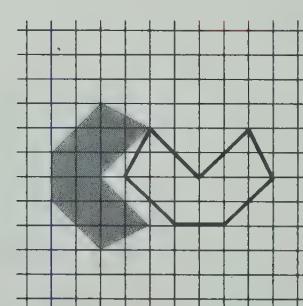
flip

7.



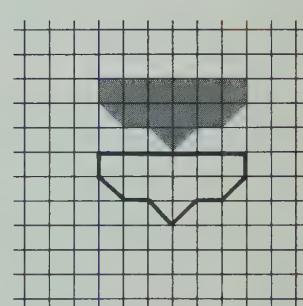
slide, flip or turn

8.



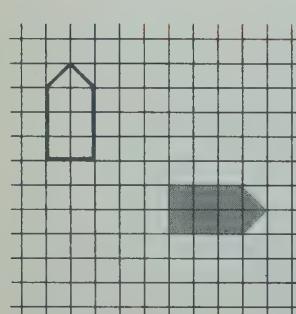
turn

9.



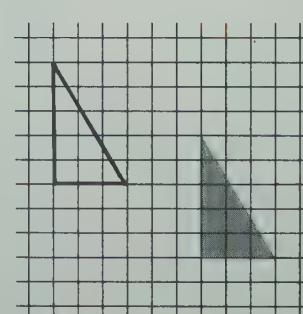
slide

10.



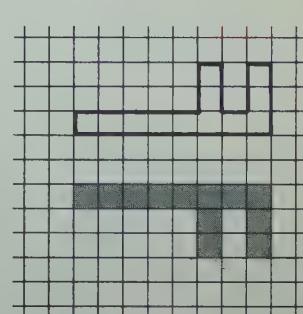
turn

11.



slide

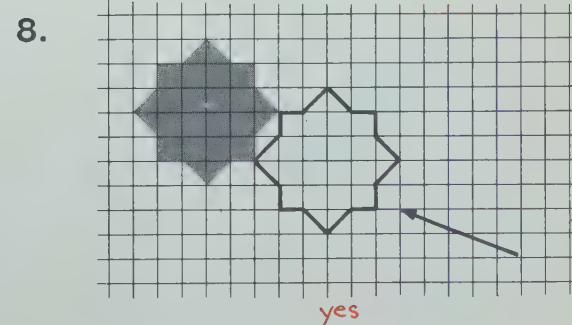
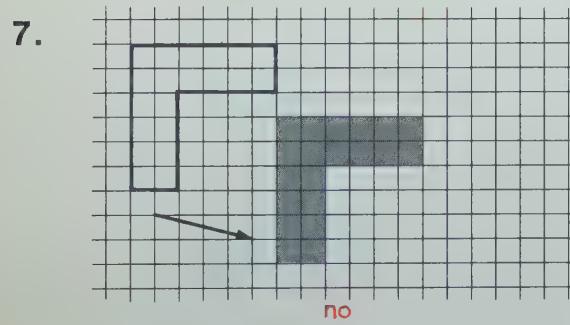
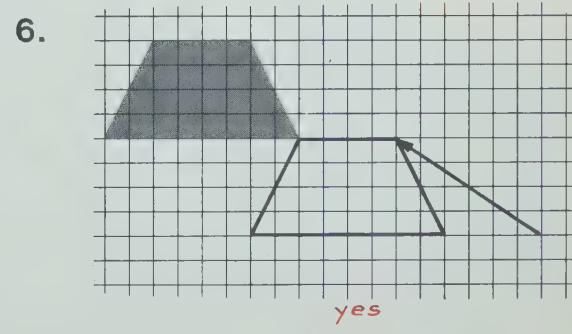
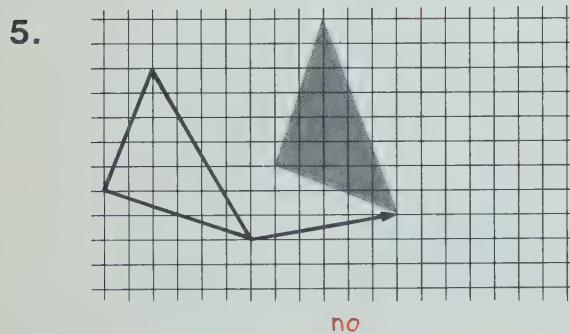
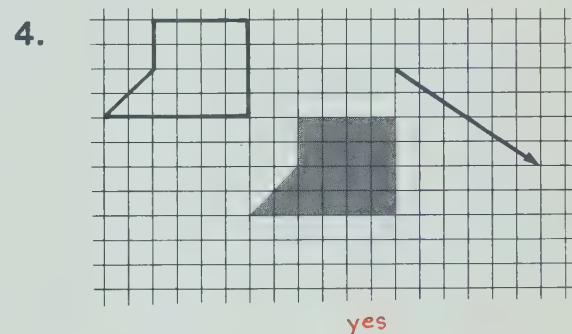
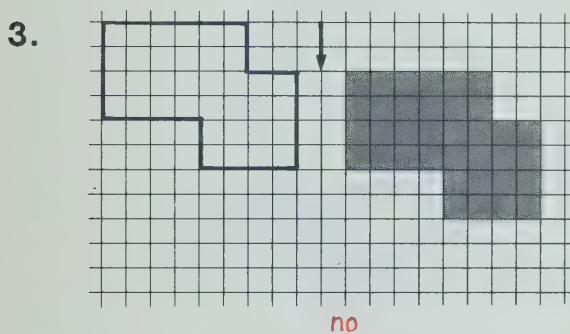
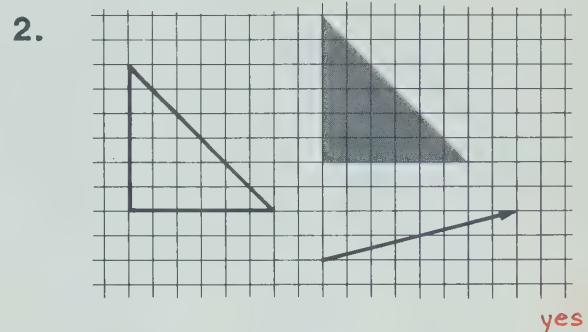
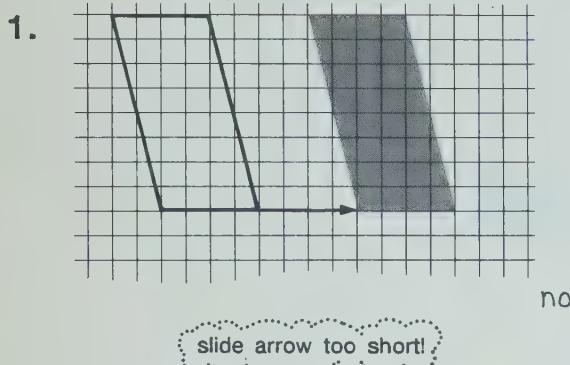
12.



flip

Slides

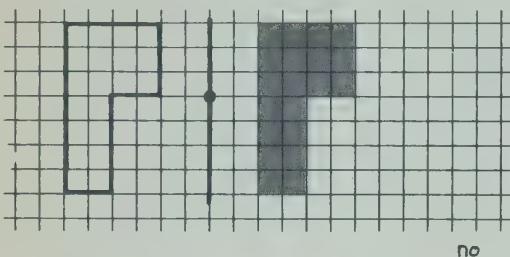
Use tracing paper. Test whether the gray shape is the slide image of the white shape for the given slide arrow.



Flips

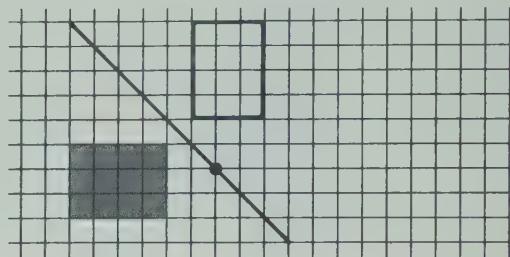
Use tracing paper. Test whether the gray shape is the flip image of the white shape for the given flip line.

1.



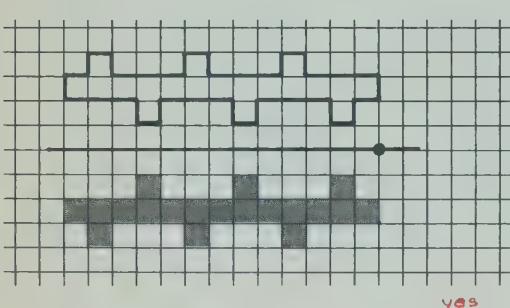
gray shape is not "flipped"

2.



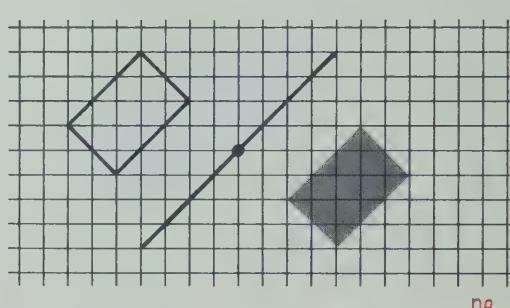
yes

3.



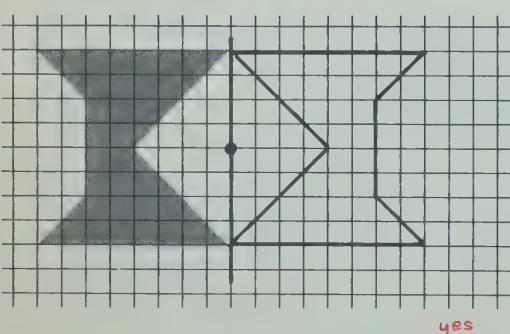
yes

4.



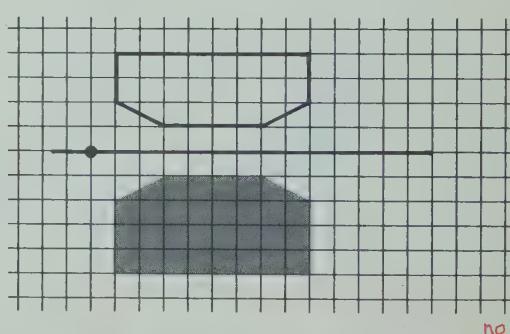
no

5.



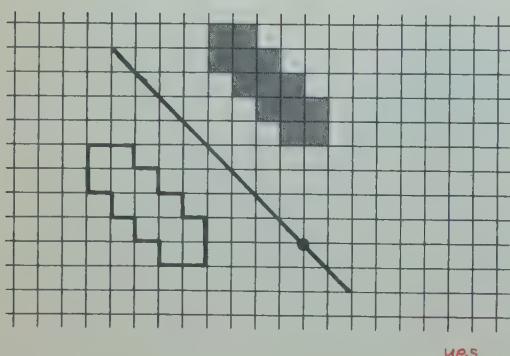
yes

6.



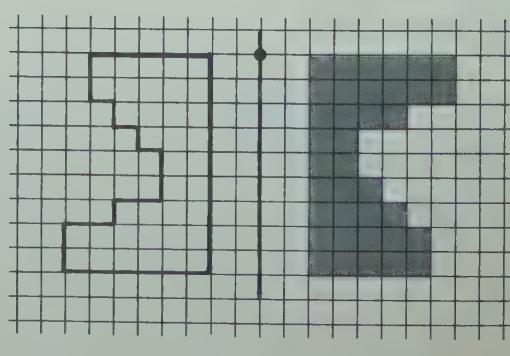
no

7.



yes

8.

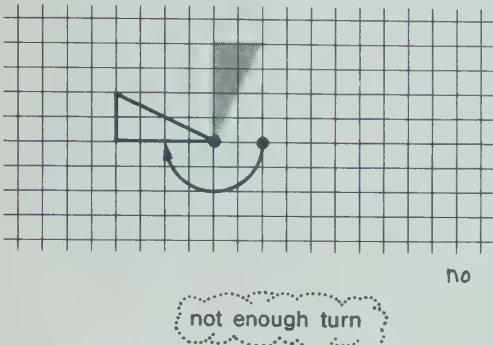


no

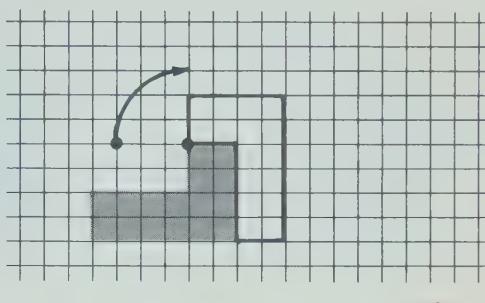
Turns

Use tracing paper. Test whether the gray shape is the turn image of the white shape for the given turn centre and turn arrow.

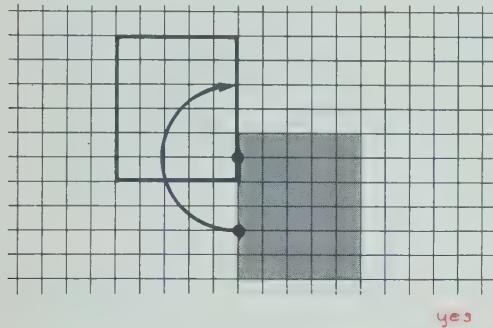
1.



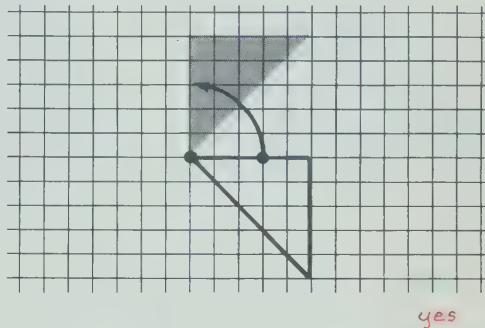
2.



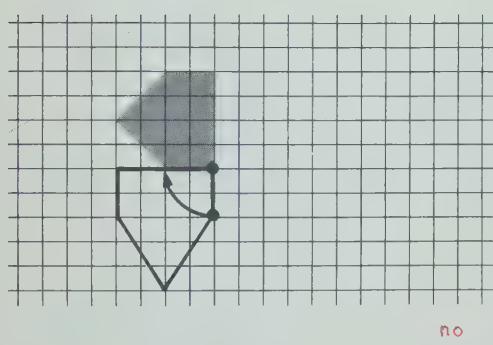
3.



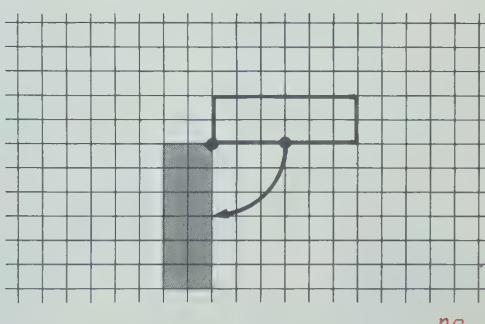
4.



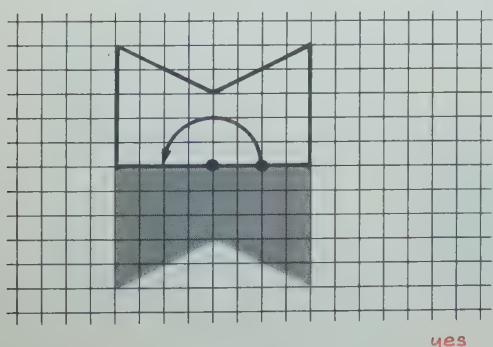
5.



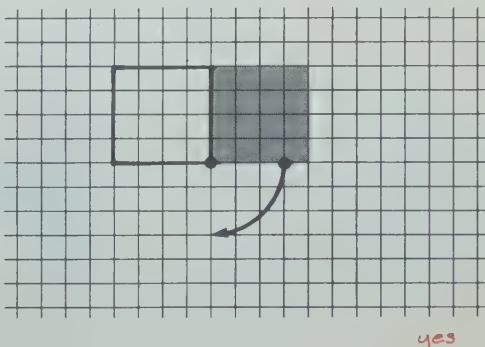
6.



7.



8.

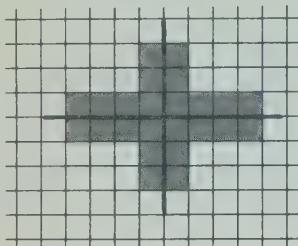


Flip Lines and Lines of Symmetry

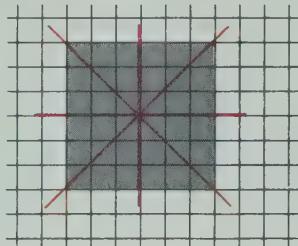
Draw the lines of symmetry for each shape.

Guess a line of symmetry. Then use tracing paper to check:
The part of a figure on one side of a line of symmetry is the flip image of the part on the other side.

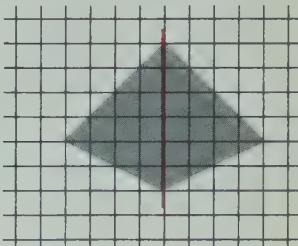
1.



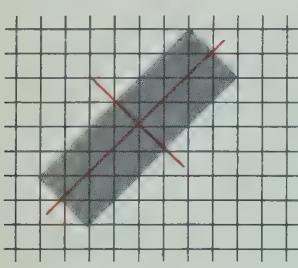
2.



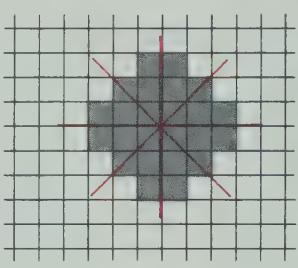
3.



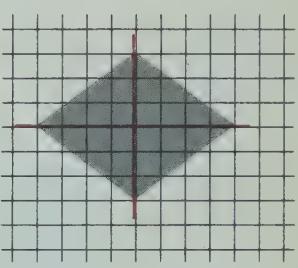
4.



5.



6.



Checking for Symmetry

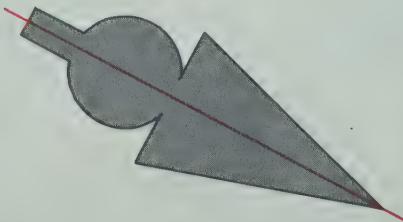
Draw the lines of symmetry for each shape.

Trace the shape. Then look for a way to fold the tracing paper so that the parts of the shape on each fold match.

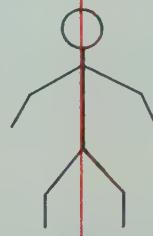
1.



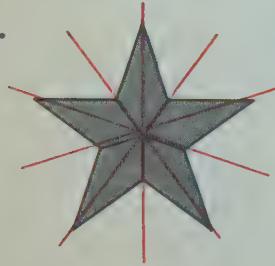
2.



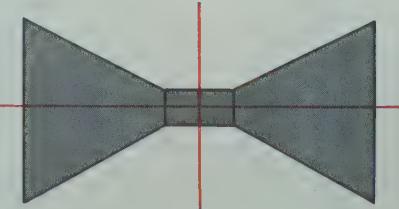
3.



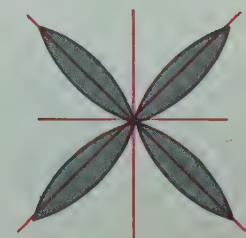
4.



5.

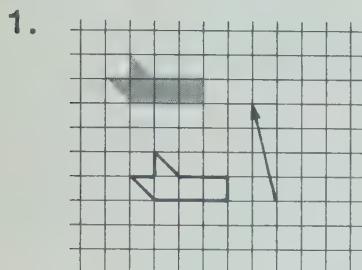


6.

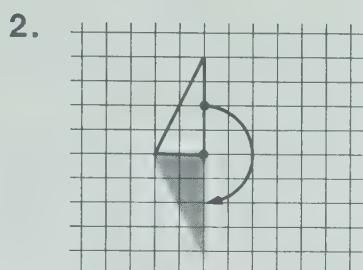


Practice

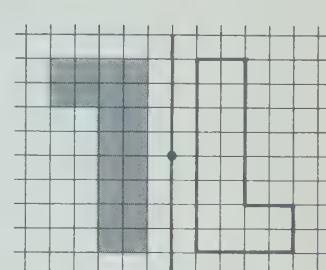
Use tracing paper. Test whether the gray shape is a slide, flip, or turn image of the white shape for the given slide arrow, flip line, or turn arrow.



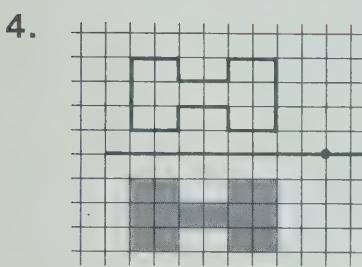
yes (slide)



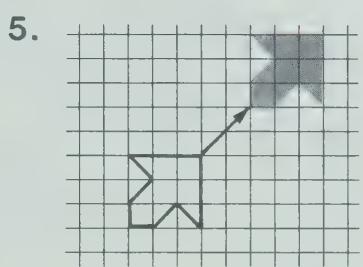
no



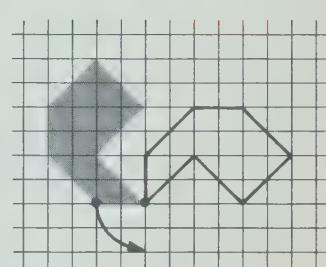
not a flip



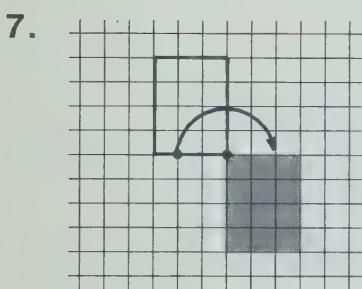
yes



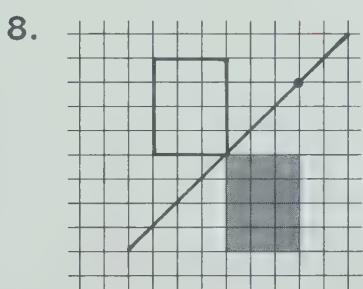
no



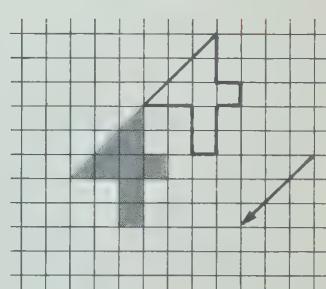
yes



yes

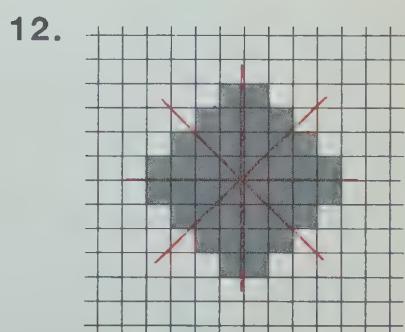
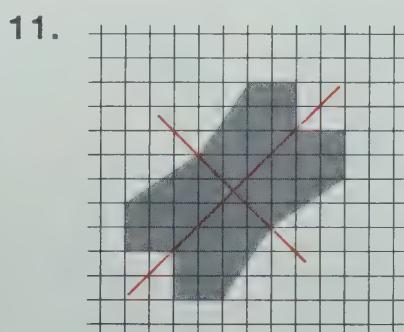
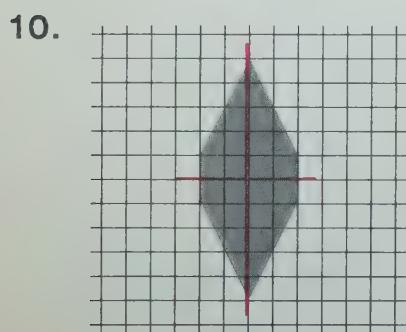


no

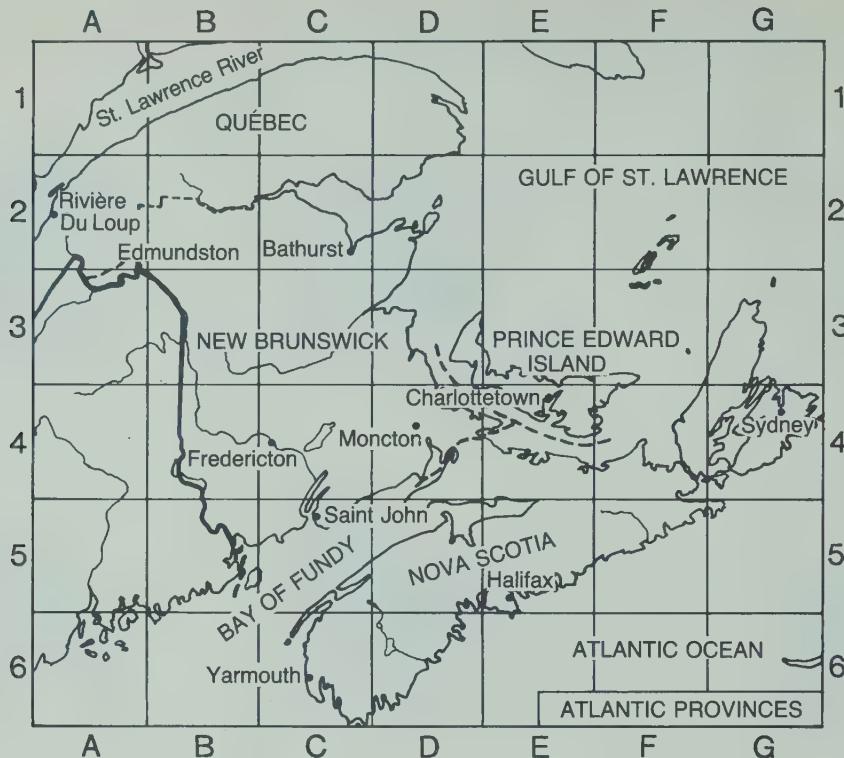


yes

Find the lines of symmetry for each shape.
Use tracing paper to check.



Places on a Map



Name the region for

1. Charlottetown. (E,4)	2. Yarmouth. (c,6)	3. Sydney. (G,4)
4. Halifax. (E,5)	5. Moncton. (D,4)	6. Bathurst. (C,2)
7. Riviere Du Loup. (A,2)	8. Fredericton. (C,4)	9. Edmundston. (A,2)

Name the regions for

10. the border of Canada and the United States.
(A,3), (A,2), (B,3), (B,4), (B,5),

11. New Brunswick.
(A,2), (A,3), (B,2), (B,3), (B,4), (B,5),
(C,2), (C,3), (C,4), (C,5), (D,2), (D,3), (D,4), (E,4)

12. the Bay of Fundy.
(B,6), (B,5), (C,6), (C,5), (D,5), (D,4), (E,5)

13. the Nova Scotia coastline.
(C,5), (C,6), (D,4), (D,5), (D,6), (E,4), (E,5),
(F,3), (F,4), (F,5), (G,3), (G,4), (G,5)

Name

14. a city in region (C, 5). Saint John

15. a river in region (B, 1). St. Lawrence

16. a province in regions (D, 3), (D, 4),
(E, 3), (E, 4), (F, 3), (F, 4).

17. two provinces that share region (C, 2).
Quebec, New Brunswick

Prince Edward Island

Positions on a Grid

Write a number pair for each point.

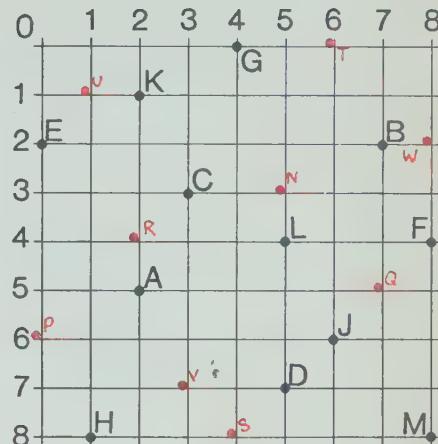
1. A(2,5)	2. B(7,2)	3. C(3,3)
-----------	-----------	-----------

4. D(5,7) 5. E(0,2) 6. F(8,4)
 7. G(4,0) 8. H(1,8) 9. J(6,6)
 10. K(2,1) 11. L(5,4) 12. M(8,8)

On the grid, draw a point for each number pair.

13. N(5,3)	14. P(0,6)	15. Q(7,5)
------------	------------	------------

16. R(2,4) 17. S(4,8) 18. T(6,0)
 19. U(1,1) 20. V(3,7) 21. W(8,2)



Practice

1. Sally delivers newspapers to people living in 3 large apartment buildings. She has 78 customers in one building. In the other two she has 56 customers and 68 customers. How many papers does she need? **202**

2. The library has 420 books which it plans to display on 7 shelves. All the shelves are to have the same number of books. How many books should be put on each shelf? **60**

3. Maria received \$10.00 for her birthday. She bought a puzzle for \$1.89 and a book for \$2.95. How much does she have left? **\$ 5.16**

4. 265 students attend Moro School. Each student has agreed to find 3 sponsors for the play. How many sponsors will that be? **795**

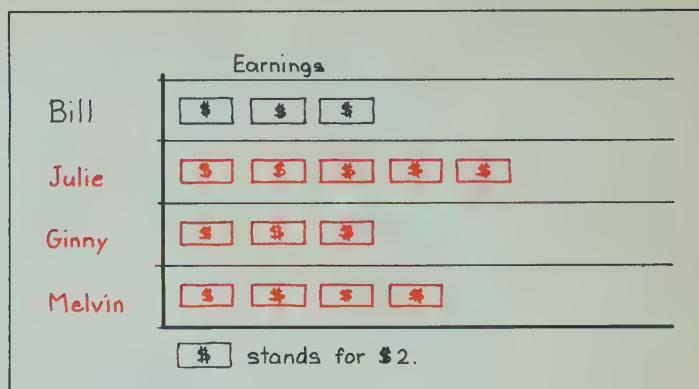
5. St. Jacques is 415 km away and Rawling is 88 km beyond that. How far away is Rawling? **503 km**

6. 2017 people voted in the town election this year. 1926 voted last year. How many more voted this year? **91**

Drawing Pictographs

Draw a pictograph for the given information.

Worker	Earnings
1. Bill	\$ 6
Julie	\$10
Ginny	\$ 6
Melvin	\$ 8



Grade	Prize Winners
2. 1	6
2	3
3	9
4	6
5	12
6	9

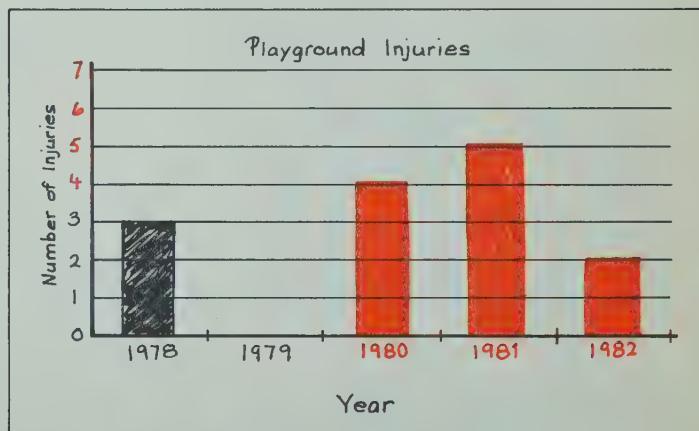
Graphs will vary.



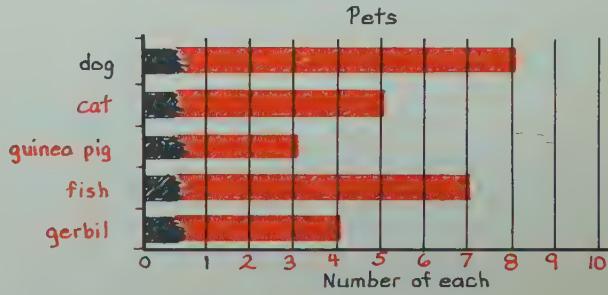
Drawing Bar Graphs

Draw a bar graph for the given information.

Year	Playground Injuries
1. 1978	3
1979	0
1980	4
1981	5
1982	2



Pet	Number
2. dog	8
cat	5
guinea pig	3
fish	7
gerbil	4



Practice

Perform the indicated operation.

1.
$$\begin{array}{r} \$5.69 \\ + 7.64 \\ \hline \$13.33 \end{array}$$

2.
$$\begin{array}{r} 5210 \\ - 3187 \\ \hline 2023 \end{array}$$

3.
$$\begin{array}{r} 274 \\ \times 7 \\ \hline 1918 \end{array}$$

4.
$$\begin{array}{r} 90 \\ 7)630 \\ \hline \end{array}$$

5.
$$\begin{array}{r} \$3.71 \\ \times 5 \\ \hline \$18.55 \end{array}$$

6.
$$\begin{array}{r} 7003 \\ - 2138 \\ \hline 4865 \end{array}$$

7.
$$\begin{array}{r} 703 \\ 815 \\ + 362 \\ \hline 1880 \end{array}$$

8.
$$\begin{array}{r} 7 \text{ R } 4 \\ 8)60 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 415 \\ \times 8 \\ \hline 3320 \end{array}$$

10.
$$\begin{array}{r} 748 \\ - 192 \\ \hline 556 \end{array}$$

11.
$$273 - 186$$

$$\underline{87}$$

12.
$$540 \div 9$$

$$\underline{60}$$

13.
$$9 \times 57$$

$$\underline{513}$$

14.
$$72 \div 8$$

$$\underline{9}$$

15.
$$23 + 806 + 94$$

$$\underline{923}$$

16.
$$3 \times 2 \times 5 \times 7$$

$$\underline{210}$$

17.
$$\$4.19 - \$0.37$$

$$\underline{\$3.82}$$

Solve. Show your work.

18. Tennis balls come 3 to a can. If each can sells for about \$3.95, how much would 6 cans cost? $\$23.70$

20. It takes 4 people to play "doubles" in tennis. A group of 28 players would require how many courts to play doubles matches all at one time? 7

22. A set in the school tennis tournament may have as few as 6 games and as many as 11. What is the greatest number of games possible for a match of 5 sets? 55

19. Lucy bought a tennis outfit for \$29.95 and a new racket for \$48.50. Together what did these cost? $\$78.45$

21. The Schroeders paid \$120 for family tennis lessons. Later \$35 was returned for cancelled lessons. What was the final cost? $\$85$

23. When the tennis weekend was over, 135 matches had been played on Saturday and 257 had been played on Sunday. How many matches were played on the weekend? 392

Using Decimals to Show Wholes and Tenths

Write the decimal.

1. twelve and four-tenths 12.4 | 2. two-tenths 0.2 3. six and one-tenth 6.1

Write the words.

4. 4.9 four and nine-tenths | 5. 0.4 four-tenths 6. 1.6 one and six-tenths

Write the decimal.

7. nine and seven-tenths 9.7	8. nine-tenths 0.9
9. five and six-tenths 5.6	10. two and five-tenths 2.5
11. three-tenths 0.3	12. fourteen and eight-tenths 14.8

Write the words.

13. 3.2 three and two-tenths	14. 0.1 one-tenth	15. 8.8 eight and eight-tenths
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Using Decimals to Show Wholes and Hundredths

Write the decimal.

1. one and eighteen-hundredths 1.18	2. forty-six hundredths 0.46
3. five-hundredths 0.05	4. ten and two-hundredths 10.02

Write the words.

5. 2.59 two and fifty-nine hundredths	6. 1.06 one and six-hundredths	7. 0.25 twenty-five hundredths
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Write the decimal.

8. six and seventy-nine hundredths 6.79	9. one and ten-hundredths 1.10
10. two-hundredths 0.02	11. four and sixteen-hundredths 4.16
12. two and seven-hundredths 2.07	13. fifty-five hundredths 0.55

Write the words.

14. 3.18 three and eighteen-hundredths	15. 0.92 ninety-two hundredths	16. 5.01 five and one-tenth
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Relating Hundredths and Tenths

Complete the chart.

	<u>Using tenths</u>	<u>Using hundredths</u>
1.	<u>2.1</u> two and one-tenth	<u>2.10</u> two and ten-hundredths
2.	<u>0.4</u> four-tenths	<u>0.40</u> forty-hundredths
3.	<u>3.8</u> three and eight-tenths	<u>3.80</u> three and eighty-hundredths
4.	<u>1.5</u> one and five-tenths	<u>1.50</u> one and fifty-hundredths
5.	<u>0.2</u> two-tenths	<u>0.20</u> twenty-hundredths
6.	<u>2.9</u> two and nine-tenths	<u>2.90</u> two and ninety-hundredths
7.	<u>1.7</u> one and seven-tenths	<u>1.70</u> one and seventy-hundredths
8.	<u>0.3</u> three-tenths	<u>0.30</u> thirty-hundredths
9.	<u>4.6</u> four and six-tenths	<u>4.60</u> four and sixty-hundredths

Decimals and Money

Give the value of each.

	dollars	dimes	pennies	value		dollars	dimes	pennies	value	
1.	3	2	16	<u>\$3.36</u>		2.	3	13	<u>1</u>	<u>\$4.31</u>
3.	0	16	8	<u>\$1.68</u>		4.	0	7	17	<u>\$0.87</u>
5.	1	14	4	<u>\$2.44</u>		6.	1	2	12	<u>\$1.32</u>
7.	3	11	5	<u>\$4.15</u>		8.	1	12	14	<u>\$2.34</u>
9.	0	9	10	<u>\$1.00</u>		10.	0	15	11	<u>\$1.61</u>
11.	2	18	10	<u>\$3.90</u>		12.	5	9	19	<u>\$6.09</u>
13.	1	0	5	<u>\$1.05</u>		14.	4	10	10	<u>\$5.10</u>
15.	3	9	12	<u>\$4.02</u>		16.	1	17	18	<u>\$2.88</u>

Comparing and Ordering Decimals

Which is greater,

1. 1.79 or 1.97? 1.97

2. 3.7 or 2.8? 3.7

3. 0.75 or 0.77? 0.77

The first digits are alike ...
of the second digits,
9 is greater.

4. 5.4 or 5.5? 5.5

5. 65.4 or 6.54? 65.4

6. 0.28 or 0.82? 0.82

7. 2.89 or 2.9? 2.9

Which is less,

8. 0.06 or 0.6? 0.06

9. 2.9 or 2.10? 2.10

10. 6.5 or 6.07? 6.07

List from least to greatest.

11. 0.01, 1.1, 1.0, 0.1
0.01, 0.1, 1.0, 1.1

12. 3.3, 3.15, 3.14, 13.1
3.14, 3.15, 3.3, 13.1

13. 1.02, 1.3, 1.22, 1.20
1.02, 1.20, 1.22, 1.3

List from greatest to least.

14. 1.8, 1.18, 0.88, 1.81
1.81, 1.80, 1.18, 0.88

15. 2.07, 2.7, 0.27, 2.77
2.77, 2.7, 2.07, 0.27

16. 3.26, 32.6, 2.26, 22.6
32.6, 22.6, 3.26, 2.26

Adding Decimals

Add.

1. $\begin{array}{r} 2.87 \\ + 5.43 \\ \hline 8.30 \end{array}$	2. $\begin{array}{r} 2.49 \\ + 4.82 \\ \hline 7.31 \end{array}$	3. $\begin{array}{r} 12.19 \\ + 53.05 \\ \hline 65.24 \end{array}$	4. $5.62 + 3.18 = 8.80$
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5. 3.25
3.67
6.92

6. 1.95
6.44
8.39

7. 63.5
24.5
88.0

8. 7.69
0.51
8.20

9. 2.7
2.6
5.3

10. 4.87
0.34
5.21

11. 4.5
2.9
7.4

12. 5.69
1.49
7.18

13. 3.84
6.73
10.57

14. 1.95
7.32
9.27

15. $33.67 + 9.87 = 43.54$

16. $34.1 + 16.8 = 50.9$

17. $31.78 + 24.42 = 56.20$

Practice

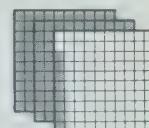
Write a decimal to match each picture.



1. 1.8



2. 0.67



3. 2.08



Write the decimal.

6. two-tenths 0.2

7. eighty-seven hundredths 0.87

8. one and three-tenths 1.3

9. four and one-hundredth 4.01

Write the words.

10. 0.5 five-tenths

11. 4.26 four and twenty-six hundredths

12. 2.6 two and six-tenths

13. 0.07 seven-hundredths

Write each as a two-place decimal.

14. 6.7 6.70

15. 0.9 0.90

Write each as a one-place decimal.

16. 14.30 14.3

17. 0.10 0.1

Complete.

18. 0.27 shows 2 tenths 7 hundredths, or 27 hundredths.19. 4 dollars 12 dimes are worth \$5.20.20. 1 dollar 4 dimes 18 pennies are worth \$1.58.21. 15 dimes 16 pennies are worth \$1.66.

Which is greater,

22. 1.2 or 1.6?

23. 2.30 or 2.03?

24. 0.9 or 0.3?

25. 4.20 or 4.22?

1.6

2.30

0.9

4.22

List from least to greatest.

List from greatest to least.

26. 0.94, 1.49, 0.49, 0.99
0.49, 0.94, 0.99, 1.4927. 3.33, 3.63, 0.66, 3.36
3.63, 3.36, 3.33, 0.66

Add.

28.
$$\begin{array}{r} 1.8 \\ + 2.6 \\ \hline 4.4 \end{array}$$

29.
$$\begin{array}{r} 6.36 \\ + 1.35 \\ \hline 7.71 \end{array}$$

30.
$$\begin{array}{r} 2.6 \\ + 5.4 \\ \hline 8.0 \end{array}$$

31.
$$\begin{array}{r} 2.67 \\ + 5.59 \\ \hline 8.26 \end{array}$$

32.
$$\begin{array}{r} 1.83 \\ + 0.67 \\ \hline 2.50 \end{array}$$

33.
$$8.6 + 0.8 = 9.4$$

34.
$$4.84 + 3.17 = 8.01$$

35.
$$6.95 + 1.08 = 8.03$$

Subtracting Decimals

Subtract.

1. $\begin{array}{r} 6.94 \\ - 4.58 \\ \hline 2.36 \end{array}$	2. $\begin{array}{r} 84.5 \\ - 16.9 \\ \hline 67.6 \end{array}$	3. $\begin{array}{r} \$70.00 \\ - 35.81 \\ \hline \$34.19 \end{array}$	4. $8.60 - 7.35 = 1.25$
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5. $\begin{array}{r} 7.93 \\ - 5.48 \\ \hline 2.45 \end{array}$	6. $\begin{array}{r} 30.01 \\ - 24.72 \\ \hline 5.29 \end{array}$	7. $\begin{array}{r} \$56.39 \\ - 47.93 \\ \hline \$8.46 \end{array}$	8. $\begin{array}{r} 50.0 \\ - 36.9 \\ \hline 13.1 \end{array}$	9. $\begin{array}{r} 84.96 \\ - 36.38 \\ \hline 48.58 \end{array}$
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10. $\begin{array}{r} \$80.64 \\ - 63.59 \\ \hline \$17.05 \end{array}$	11. $\begin{array}{r} 9.64 \\ - 2.93 \\ \hline 6.71 \end{array}$	12. $\begin{array}{r} 70.50 \\ - 61.56 \\ \hline 8.94 \end{array}$	13. $\begin{array}{r} 7.3 \\ - 5.7 \\ \hline 1.6 \end{array}$	14. $\begin{array}{r} 43.61 \\ - 25.68 \\ \hline 17.93 \end{array}$
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15. $10.2 - 6.4$ 3.8	16. $\$10.15 - \2.51 $\$7.64$	17. $3.81 - 1.44$ 2.37
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Multiplying Decimal Tenths and Whole Numbers

Multiply.

1. $\begin{array}{r} 0.8 \\ \times 4 \\ \hline 3.2 \end{array}$ 4 (4 x 8 tenths) 32 tenths	2. $\begin{array}{r} 0.7 \\ \times 5 \\ \hline 3.5 \end{array}$ 5 (5 x 7 tenths)	3. $\begin{array}{r} 0.6 \\ \times 3 \\ \hline 1.8 \end{array}$	4. $6 \times 0.5 = 3.0$
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5. $\begin{array}{r} 0.5 \\ \times 3 \\ \hline 1.5 \end{array}$	6. $\begin{array}{r} 0.4 \\ \times 9 \\ \hline 3.6 \end{array}$	7. $\begin{array}{r} 0.4 \\ \times 7 \\ \hline 2.8 \end{array}$	8. $\begin{array}{r} 0.8 \\ \times 5 \\ \hline 4.0 \end{array}$	9. $\begin{array}{r} 0.8 \\ \times 2 \\ \hline 1.6 \end{array}$
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10. $\begin{array}{r} 0.4 \\ \times 4 \\ \hline 1.6 \end{array}$	11. $\begin{array}{r} 0.7 \\ \times 9 \\ \hline 6.3 \end{array}$	12. $\begin{array}{r} 0.8 \\ \times 8 \\ \hline 6.4 \end{array}$	13. $\begin{array}{r} 0.6 \\ \times 6 \\ \hline 3.6 \end{array}$	14. $\begin{array}{r} 0.5 \\ \times 2 \\ \hline 1.0 \end{array}$
--	--	--	--	--

15. $3 \times 0.9 = 2.7$	16. $7 \times 0.2 = 1.4$	17. $9 \times 0.8 = 7.2$	18. $8 \times 0.3 = 2.4$
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Multiplying One-Place Decimals

Multiply.

1.
$$\begin{array}{r} 3.7 \\ \times 4 \\ \hline 14.8 \end{array}$$

2.
$$\begin{array}{r} 4.6 \\ \times 2 \\ \hline 9.2 \end{array}$$

3.
$$\begin{array}{r} 5.7 \\ \times 3 \\ \hline 17.1 \end{array}$$

4. $2.3 \times 7 = 16.1$

5.
$$\begin{array}{r} 2.9 \\ \times 6 \\ \hline 17.4 \end{array}$$

6.
$$\begin{array}{r} 4.6 \\ \times 4 \\ \hline 18.4 \end{array}$$

7.
$$\begin{array}{r} 9.3 \\ \times 8 \\ \hline 74.4 \end{array}$$

8.
$$\begin{array}{r} 5.1 \\ \times 9 \\ \hline 45.9 \end{array}$$

9.
$$\begin{array}{r} 7.6 \\ \times 5 \\ \hline 38.0 \end{array}$$

10.
$$\begin{array}{r} 4.8 \\ \times 7 \\ \hline 33.6 \end{array}$$

11.
$$\begin{array}{r} 7.5 \\ \times 7 \\ \hline 52.5 \end{array}$$

12.
$$\begin{array}{r} 9.7 \\ \times 9 \\ \hline 87.3 \end{array}$$

13.
$$\begin{array}{r} 6.2 \\ \times 3 \\ \hline 18.6 \end{array}$$

14.
$$\begin{array}{r} 5.7 \\ \times 8 \\ \hline 45.6 \end{array}$$

15. $5 \times 1.2 = 6.0$

16. $6 \times 3.6 = 21.6$

17. $4 \times 9.2 = 36.8$

18. $6 \times 8.4 = 50.4$

19. $9 \times 3.8 = 34.2$

20. $5 \times 4.9 = 24.5$

Rounding Decimal Tenths to Whole Numbers

Round to the nearest whole number.

1. 3.2	2. 6.8	3. 4.5	4. 9.9	5. 2.6
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6. 7.1

7. 5.6

8. 0.9

9. 3.7

10. 1.1

11. 6.2

12. 8.8

13. 5.9

14. 8.5

15. 14.2

16. 12.9

17. 0.5

18. 9.7

19. 8.6

20. 0.7

Round each to the nearest whole number of litres, kilometres, or kilograms.

21. 7.3 km

22. 1.5 L

23. 3.4 kg

24. 2.8 L

25. 4.9 km

26. 6.4 L

27. 5.1 kg

28. 4.3 L

29. 9.5 km

30. 7.6 kg

31. 0.8 km

32. 8.2 kg

Rounding Addends to Estimate the Sum

Round each addend to the nearest whole number.

Then add to estimate the sum.

1. $\begin{array}{r} 3.6 \\ + 4.1 \\ \hline 8 \end{array}$	2. $\begin{array}{r} 1.7 \\ + 8.9 \\ \hline 11 \end{array}$	3. $\begin{array}{r} 2.3 \\ + 7.8 \\ \hline 10 \end{array}$	4. $\begin{array}{r} 6.5 \\ + 4.5 \\ \hline 12 \end{array}$
--	---	---	---

5. $\begin{array}{r} 1.9 \\ + 1.1 \\ \hline 3 \end{array}$	6. $\begin{array}{r} 6.5 \\ + 7.8 \\ \hline 15 \end{array}$	7. $\begin{array}{r} 1.0 \\ + 9.9 \\ \hline 11 \end{array}$	8. $\begin{array}{r} 5.4 \\ + 8.7 \\ \hline 14 \end{array}$
--	---	---	---

9. $\begin{array}{r} 1.2 \\ + 3.2 \\ + 9.8 \\ \hline 14 \end{array}$	10. $\begin{array}{r} 6.3 \\ + 1.3 \\ + 3.5 \\ \hline 11 \end{array}$	11. $\begin{array}{r} 8.7 \\ + 2.3 \\ + 2.9 \\ \hline 14 \end{array}$	12. $\begin{array}{r} 4.6 \\ + 2.4 \\ + 3.3 \\ \hline 10 \end{array}$
--	---	---	---

13. $4.6 + 4.7$	14. $5.6 + 2.1$	15. $1.3 + 8.9 + 2.7$
10	8	13

Rounding Factors to Estimate the Product

Round to the nearest whole number.

Then multiply to estimate the product.

1. $\begin{array}{r} 2.1 \\ + 3 \\ \hline 6 \end{array}$	2. $\begin{array}{r} 7.8 \\ + 8 \\ \hline 64 \end{array}$	3. $\begin{array}{r} 5.6 \\ + 5 \\ \hline 30 \end{array}$	4. $\begin{array}{r} 3.4 \\ + 6 \\ \hline 24 \end{array}$
--	---	---	---

5. $\begin{array}{r} 1.6 \\ + 8 \\ \hline 16 \end{array}$	6. $\begin{array}{r} 6.7 \\ + 3 \\ \hline 21 \end{array}$	7. $\begin{array}{r} 9.1 \\ + 2 \\ \hline 18 \end{array}$	8. $\begin{array}{r} 4.3 \\ + 4 \\ \hline 16 \end{array}$
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9. $\begin{array}{r} 5.9 \\ + 6 \\ \hline 36 \end{array}$	10. $\begin{array}{r} 19.9 \\ + 3 \\ \hline 60 \end{array}$	11. $\begin{array}{r} 4.5 \\ + 7 \\ \hline 35 \end{array}$	12. $\begin{array}{r} 13.8 \\ + 4 \\ \hline 56 \end{array}$
---	---	--	---

13. $\begin{array}{r} 32.3 \\ + 5 \\ \hline 160 \end{array}$	14. $\begin{array}{r} 6.5 \\ + 2 \\ \hline 14 \end{array}$	15. $\begin{array}{r} 15.2 \\ + 4 \\ \hline 60 \end{array}$	16. $\begin{array}{r} 26.7 \\ + 7 \\ \hline 189 \end{array}$
--	--	---	--

Practice

Perform the indicated operation.

1.
$$\begin{array}{r} 849 \\ 103 \\ + 224 \\ \hline 1176 \end{array}$$

2.
$$\begin{array}{r} 183 \\ \times 5 \\ \hline 915 \end{array}$$

3.
$$\begin{array}{r} 1102 \\ - 526 \\ \hline 576 \end{array}$$

4.
$$\begin{array}{r} 60 \\ 7 \overline{) 420 } \\ \hline \end{array}$$

5.
$$\begin{array}{r} 6.3 \\ + 7.8 \\ \hline 14.1 \end{array}$$

6.
$$\begin{array}{r} 7.3 \\ \times 4 \\ \hline 29.2 \end{array}$$

7.
$$\begin{array}{r} \$8.17 \\ - 3.52 \\ \hline \$4.65 \end{array}$$

8.
$$\begin{array}{r} 2.71 \\ + 6.38 \\ \hline 9.09 \end{array}$$

9.
$$\begin{array}{r} 68 \\ \times 7 \\ \hline 476 \end{array}$$

10.
$$\begin{array}{r} 8.0 \\ - 2.4 \\ \hline 5.6 \end{array}$$

11.
$$\begin{array}{r} 120 \div 4 \\ \hline 30 \end{array}$$

12.
$$\begin{array}{r} 6 \times 4.7 \\ \hline 28.2 \end{array}$$

13.
$$\begin{array}{r} 9.31 - 5.47 \\ \hline 3.84 \end{array}$$

14.
$$\begin{array}{r} \$8.61 + \$5.08 \\ \hline \$13.69 \end{array}$$

15.
$$\begin{array}{r} 7 \times 0.8 \\ \hline 5.6 \end{array}$$

16.
$$\begin{array}{r} 3 \times 5 \times 7 \times 2 \\ \hline 210 \end{array}$$

Solve. Show your work.

17. The mower can hold 2.3 L of fuel in its tank. Right now it has 0.5 L. How much fuel is needed to fill the tank? 1.8 L

18. One lap on the track is 0.6 km. Kevin runs 6 laps. How far has he run? 3.6 km

19. The road to York is 120 km long. The painting crew plans to paint the centre lines in 4 equal sections, with each crew member changing jobs for each section. How long will each section be? 30 km

20. Paint for the fence cost \$18.46. The painter charged \$40 plus \$2.75 for other expenses. How much did it cost to paint the fence? $\$61.21$

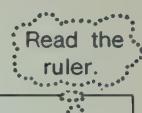
21. The auditorium holds 435 people. The school filled it for all 3 performances of the play. How many people attended? 1305

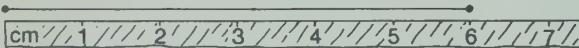
22. The land surveyor says the curved path to town is 3.14 km and the straight path is 2.87 km. How much longer is the curved path? 0.27 km

Measuring and Estimating in Centimetres

Use a centimetre ruler. Estimate first. Then measure the length to the nearest centimetre.

Estimates will vary.



1.  Estimate 5 cm Measurement 6 cm

2.  Est. _____ Meas. 9 cm

3.  Est. _____ Meas. 7 cm

4.  Est. _____ Meas. 10 cm

Estimates and measurements will vary for Exercises 5-10.

5. your pencil

6. your thumb

7. your shoe

Est. _____ Meas. _____

Est. _____ Meas. _____

Est. _____ Meas. _____

8. the width of your hand

9. the width of your ruler

10. the height of your ankle

Est. _____ Meas. _____

Est. _____ Meas. _____

Est. _____ Meas. _____

Decimetres, Centimetres, and Decimals

Complete.

$$1. 5 \text{ cm} = \underline{0.5} \text{ dm}$$

1 \text{ cm} = 0.1 \text{ dm}

$$2. 4 \text{ dm} = \underline{40} \text{ cm}$$

1 \text{ dm} = 10 \text{ cm}

$$3. 15 \text{ cm} = \underline{1.5} \text{ dm}$$

$$4. 2.7 \text{ dm} = \underline{27} \text{ cm}$$

$$5. 0.9 \text{ dm} = \underline{9} \text{ cm}$$

$$6. 11 \text{ cm} = \underline{1.1} \text{ dm}$$

$$7. 2 \text{ cm} = \underline{0.2} \text{ dm}$$

$$8. 2.3 \text{ dm} = \underline{23} \text{ cm}$$

$$9. 3 \text{ dm} = \underline{30} \text{ cm}$$

Use a ruler. Estimate first. Then measure each.

10. the width of this page

11. the length of this page

Estimate: _____ dm or _____ cm

Estimate: _____ dm or _____ cm

Measurement: 2.1 dm or 21 cm

Measurement: 2.8 dm or 28 cm

Estimates and measurements will vary for Exercises 12 and 13.

12. the height of your knee

13. the length from elbow to fingertip

Estimate: _____ dm or _____ cm

Estimate: _____ dm or _____ cm

Measurement: _____ dm or _____ cm

Measurement: _____ dm or _____ cm

Metres, Centimetres, and Decimals

Complete.

1. $135 \text{ cm} = \underline{1.35} \text{ m}$ <small>(100 cm = 1 m)</small>	2. $0.68 \text{ m} = \underline{68} \text{ cm}$ <small>(0.01 m = 1 cm)</small>
3. $89 \text{ cm} = \underline{0.89} \text{ m}$	4. $1.7 \text{ m} = \underline{170} \text{ cm}$

5. $2.07 \text{ m} = \underline{207} \text{ cm}$	6. $300 \text{ cm} = \underline{3} \text{ m}$
7. $170 \text{ cm} = \underline{1.70} \text{ m}$	8. $0.8 \text{ m} = \underline{80} \text{ cm}$
9. $3 \text{ m} = \underline{300} \text{ cm}$	10. $55 \text{ cm} = \underline{0.55} \text{ m}$

Measure each in centimetres. Then give each length in metres. Answers for 11, 13, 14 will vary.

11. your height	12. the classroom door
13. how far you can step	14. how far you can hop
15. from the floor to the base of the chalkboard	16. from the floor to the top of the chalkboard

Metres, Decimetres, Centimetres, and Decimals

Complete.

1. $115 \text{ cm} = \underline{11.5} \text{ dm or } \underline{1.15} \text{ m}$	2. $72 \text{ dm} = \underline{720} \text{ cm or } \underline{7.2} \text{ m}$
3. $3.2 \text{ m} = \underline{320} \text{ cm or } \underline{32} \text{ dm}$	4. $85 \text{ cm} = \underline{8.5} \text{ dm or } \underline{0.85} \text{ m}$
5. $4.7 \text{ dm} = \underline{47} \text{ cm or } \underline{0.47} \text{ m}$	6. $7 \text{ m} = \underline{700} \text{ cm or } \underline{70} \text{ dm}$
7. $150 \text{ cm} = \underline{15} \text{ dm or } \underline{1.5} \text{ m}$	8. $12.6 \text{ dm} = \underline{126} \text{ cm or } \underline{1.26} \text{ m}$
9. $0.62 \text{ m} = \underline{62} \text{ cm or } \underline{6.2} \text{ dm}$	10. $8 \text{ dm} = \underline{80} \text{ cm or } \underline{0.80} \text{ m}$
11. $0.4 \text{ m} = \underline{40} \text{ cm or } \underline{4} \text{ dm}$	12. $70 \text{ cm} = \underline{7} \text{ dm or } \underline{0.7} \text{ m}$
13. $4.3 \text{ m} = \underline{430} \text{ cm or } \underline{43} \text{ dm}$	14. $200 \text{ cm} = \underline{20} \text{ dm or } \underline{2} \text{ m}$
15. $5.7 \text{ dm} = \underline{57} \text{ cm or } \underline{0.57} \text{ m}$	16. $50 \text{ dm} = \underline{500} \text{ cm or } \underline{5} \text{ m}$
17. $125 \text{ cm} = \underline{12.5} \text{ dm or } \underline{1.25} \text{ m}$	18. $2 \text{ m} = \underline{200} \text{ cm or } \underline{20} \text{ dm}$

Kilometres and Metres

Complete.

1. $3000 \text{ m} = \underline{3} \text{ km}$ <small>1000 m = 1 km</small>	2. $4.2 \text{ km} = \underline{4200} \text{ m}$
3. $8 \text{ km} = \underline{8000} \text{ m}$	4. $1700 \text{ m} = \underline{1.7} \text{ km}$
5. $980 \text{ m} = \underline{0.98} \text{ km}$	6. $3.7 \text{ km} = \underline{3700} \text{ m}$
7. $5070 \text{ m} = \underline{5.07} \text{ km}$	8. $0.6 \text{ km} = \underline{600} \text{ m}$
9. $2.12 \text{ km} = \underline{2120} \text{ m}$	10. $100 \text{ m} = \underline{0.1} \text{ km}$
11. $3200 \text{ m} = \underline{3.2} \text{ km}$	12. $0.8 \text{ km} = \underline{800} \text{ m}$
How many kilometres is it?	
13. Joe climbed to 12 000 m. $\underline{12}$	14. Sheila ran 3500 m. $\underline{3.5}$
How many metres is it?	
15. We hiked 4.6 km. $\underline{4600}$	16. The parachutist fell 1.25 km. $\underline{1250}$

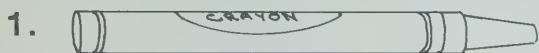
Choosing a Unit of Length

Which unit, the kilometre, the metre, or the centimetre, would you use to measure each of these?

1. length of a tennis court	metre	2. diameter of a hockey puck	centimetre	3. height of a house	metre
4. length of a highway	kilometre	5. length of a hallway	metre	6. length of a shoelace	centimetre
7. height of your ankle	centimetre	8. height of an airplane	metre <small>(kilometre may be acceptable.)</small>	9. height of a space satellite	kilometre <small>(metre may be acceptable)</small>
10. distance to the next town	kilometre	11. distance to the drinking fountain	metre	12. distance from your lip to your chin	centimetre
13. distance around your wrist	centimetre	14. distance around a soccer field	metre	15. distance around the world	kilometre

Practice

Use a centimetre ruler. Estimate first.

Then measure the length to the nearest centimetre. *Estimates may vary.*1. Estimate _____ Measurement 6 cm 2. Est. _____ Meas. 4 cm3. Est. _____ Meas. 11 cm4. Est. _____ Meas. 14 cm

5. the height of your chair seat

6. the width of this book

Est. _____ Meas. _____

Est. _____ Meas. 21 cm

Complete.

7. $70 \text{ m} = \underline{700} \text{ cm}$ 8. $48 \text{ cm} = \underline{4.8} \text{ dm}$ 9. $43 \text{ dm} = \underline{4.3} \text{ m}$

10. $3.5 \text{ dm} = \underline{35} \text{ cm}$ 11. $6 \text{ m} = \underline{60} \text{ dm}$ 12. $0.8 \text{ km} = \underline{800} \text{ m}$

13. $70 \text{ cm} = \underline{0.70} \text{ m}$ 14. $0.38 \text{ m} = \underline{38} \text{ cm}$ 15. $70 \text{ dm} = \underline{7} \text{ m}$

16. $0.9 \text{ dm} = \underline{9} \text{ cm}$ 17. $3500 \text{ m} = \underline{3.5} \text{ km}$ 18. $70 \text{ cm} = \underline{7} \text{ dm}$

19. $1.2 \text{ m} = \underline{120} \text{ cm}$ 20. $600 \text{ cm} = \underline{6} \text{ m}$ 21. $800 \text{ m} = \underline{0.8} \text{ km}$

22. $510 \text{ cm} = \underline{5.1} \text{ m}$ 23. $0.9 \text{ m} = \underline{9} \text{ dm}$ 24. $70 \text{ km} = \underline{70000} \text{ m}$

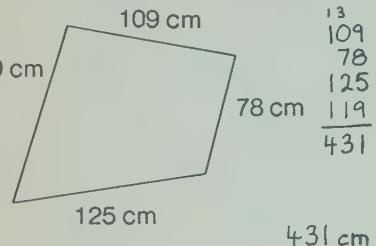
Which unit, the centimetre, the metre, or the kilometre, would be best for measuring each of these?

25. a gerbil *centimetre*26. a row boat *metre*27. an airplane trip *kilometre*28. the border
of your province
*kilometre*29. a wallet *centimetre*30. a rocket for
a space launch *metre*31. how far a
car travels *kilometre*32. how far you can
throw a ball *metre*33. how high you
can reach *centimetre*

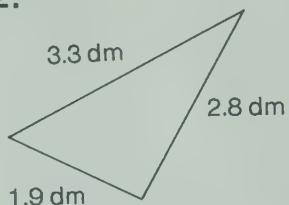
Finding the Perimeter

Find the perimeter of each.

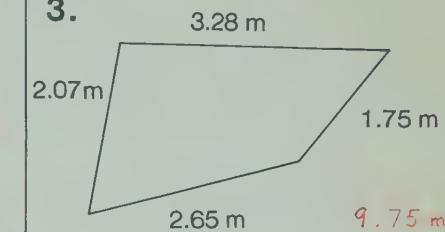
1.



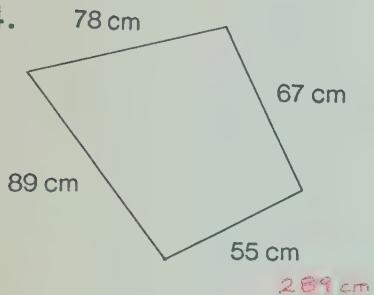
2.



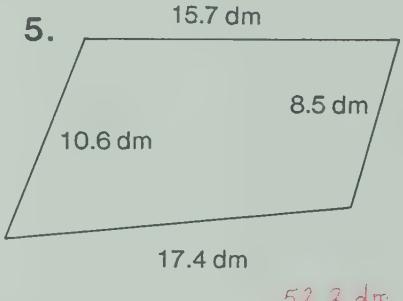
3.



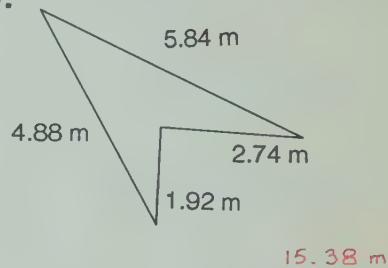
4.



5.



6.



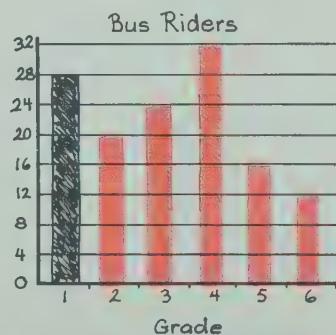
Graphing

For this information,

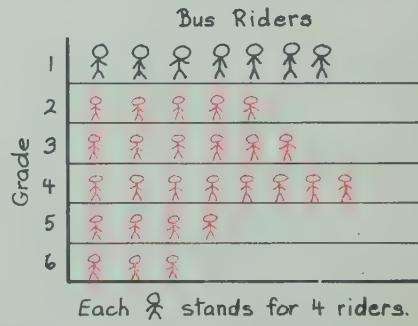
Number of students
who ride a bus

Grade 1	28
Grade 2	20
Grade 3	24
Grade 4	32
Grade 5	16
Grade 6	12

1. draw a bar graph.



2. draw a pictograph.



Use other paper.

3. Draw a bar graph and a pictograph.

Number of books read Graphs may vary.

Grade 1	5
Grade 2	5
Grade 3	10
Grade 4	20
Grade 5	25
Grade 6	30

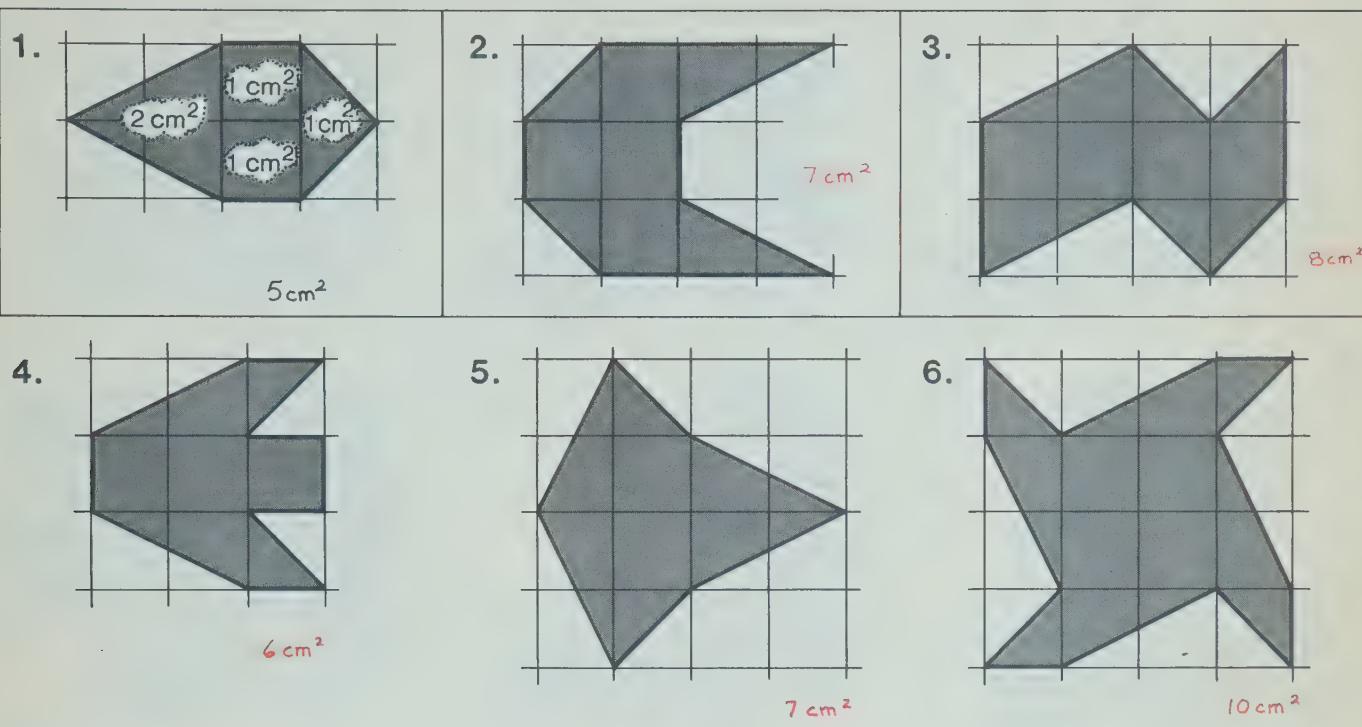
4. Draw a bar graph and a pictograph.

Number in each class Graphs may vary.

Grade 1	30
Grade 2	24
Grade 3	30
Grade 4	42
Grade 5	36
Grade 6	30

Area in Square Centimetres

Give each area in square centimetres.



Practice

Solve. Show your work.

1. Many small boats turned out to watch the 3 d of racing. The patrol boat saw there were 115 boats on Friday, 220 on Saturday, and 316 on Sunday.
How many were there in all? **651**
2. The propellar shaft is 3.75 cm in diameter. The hole in the bearing is only 3.17 cm in diameter. How much must the machinist remove from the shaft for it to fit in the bearing? **0.58 cm**
3. New cleats for the boat cost \$7.68 each. Five are needed.
How much will they cost? **\$38.40**
4. Ian's father bought a used sail boat for \$3150. He spent \$1280 fixing it up.
What was his total cost? **\$4430**
5. The sailing club lays out a triangular course. The lengths of the parts are 1.7 km, 2.9 km, and 2.3 km.
What is the distance around the course? **6.9 km**
6. T-shirts with the boat club flag cost \$5.85. Each of the 3 Boynton children bought one.
How much did they spend? **#17.55**

Using Multiplication to Find Area

Write two multiplication sentences that give the area of each shape.

1.



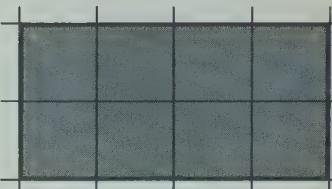
$$2 \times 3 = 6, 3 \times 2 = 6, 6 \text{ cm}^2$$

2.



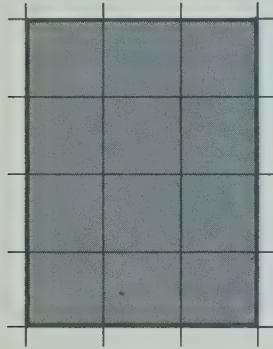
$$3 \times 4 = 12, 4 \times 3 = 12, 12 \text{ cm}^2$$

3.



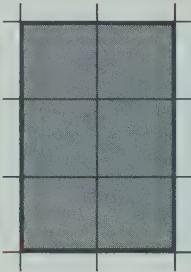
$$2 \times 4 = 8, 4 \times 2 = 8, 8 \text{ cm}^2$$

4.



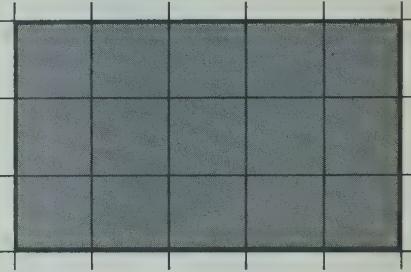
$$4 \times 3 = 12
3 \times 4 = 12
12 \text{ cm}^2$$

5.



$$3 \times 2 = 6, 2 \times 3 = 6, 6 \text{ cm}^2$$

6.

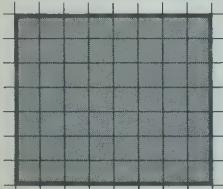


$$3 \times 5 = 15, 5 \times 3 = 15, 15 \text{ cm}^2$$

Area in Square Decimetres and Square Metres

Each square represents 1 m². What is the area of the shape?

1.



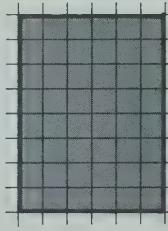
$$7 \times 8 = 56 \quad 56 \text{ m}^2$$

2.



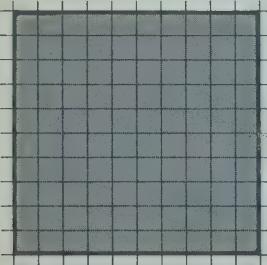
$$50 \text{ m}^2$$

3.



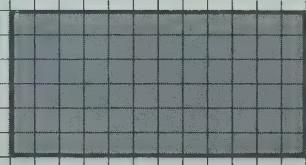
$$48 \text{ m}^2$$

4.



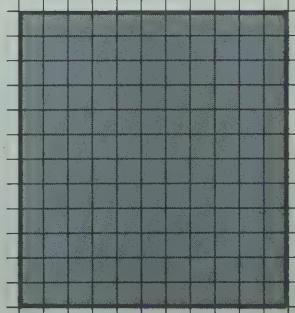
$$100 \text{ m}^2$$

5.



$$72 \text{ m}^2$$

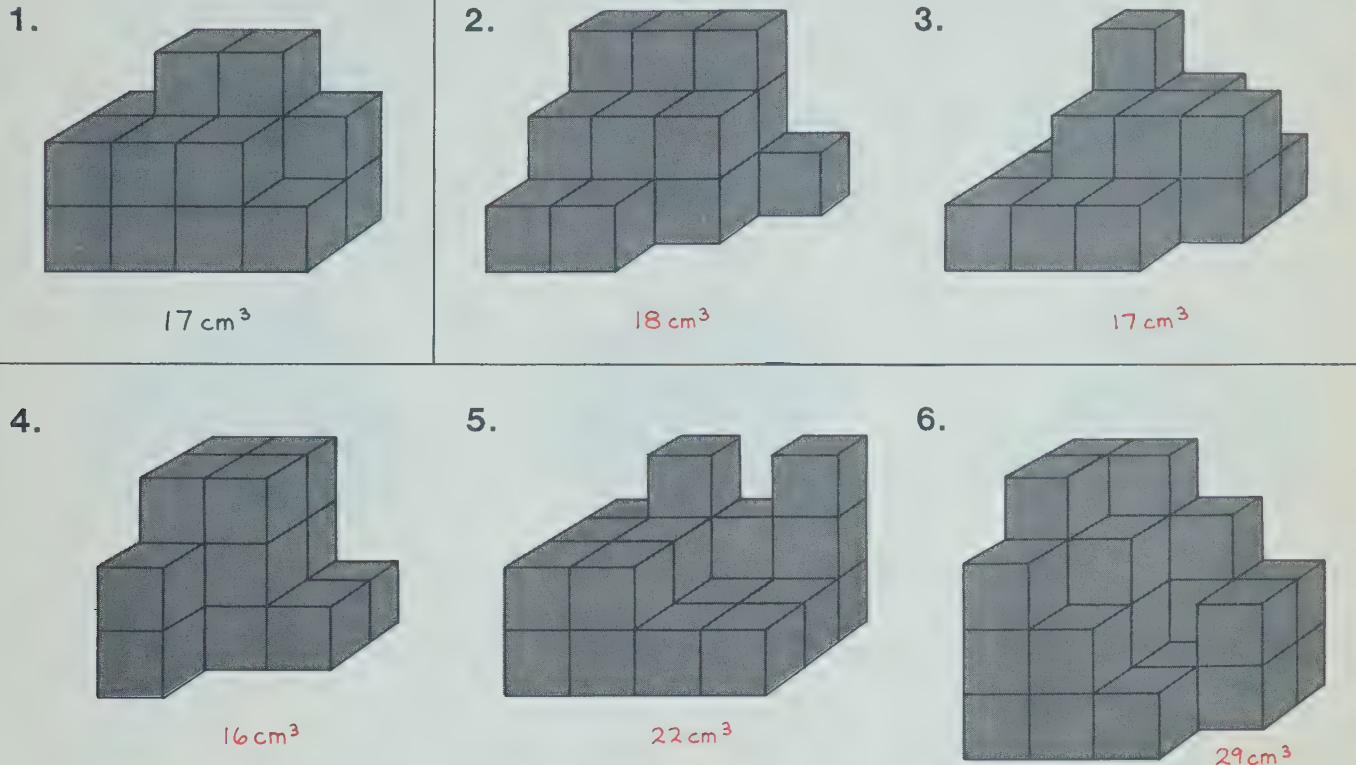
6.



$$132 \text{ m}^2$$

Volume in Cubic Centimetres

Find the volume in cubic centimetres.



Practice

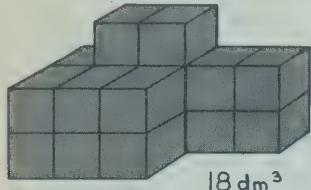
Solve. Show your work.

- The truck had a mass of 2150 kg when empty, and 3278 kg when fully loaded. How heavy was the load? 1128 kg
- Ray's kitten is seven months old today. Four of the months had 31 d. Three had 30 d. How many days old is the kitten? 214
- The forester has 210 trees to set out in 7 long rows. How many trees should go in each row? 30
- What is the perimeter of the Johnson's terrace, if two of the sides are 8.3 m and the other two are 5.9 m? 28.4 m
- At a special sale, each tape cassette cost \$3.39. Tequi bought three. Lola bought two. Together, what did they pay? $\$16.95$
- A carton contains 3 boxes. Each box contains 6 tins. Each tin contains 8 cookies. How many cookies are in the carton? 144

Volume in Cubic Decimetres

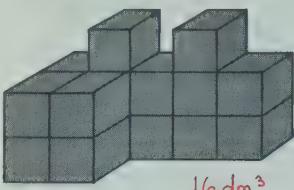
Each little cube represents 1 dm^3 .
Find the volume of each solid.

1.



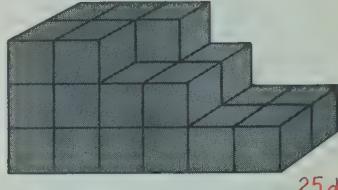
18 dm^3

2.



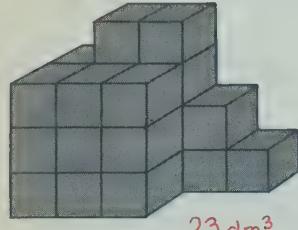
16 dm^3

3.



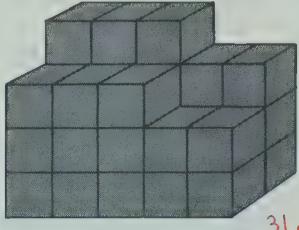
25 dm^3

4.



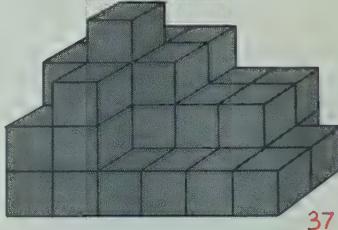
23 dm^3

5.



31 dm^3

6.



37 dm^3

Is it smaller or larger than a cubic decimetre?

7. a soccer ball

larger

8. a Rubik's Cube™

smaller

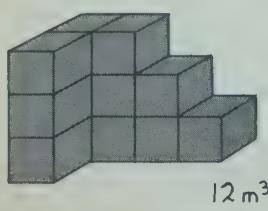
9. a shoe box

larger

Volume in Cubic Metres

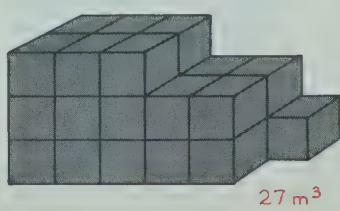
Each little cube represents 1 m^3 .
Find the volume of each solid.

1.



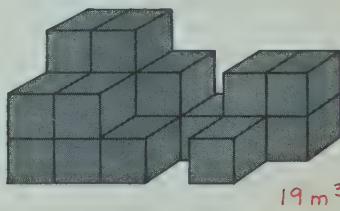
12 m^3

2.



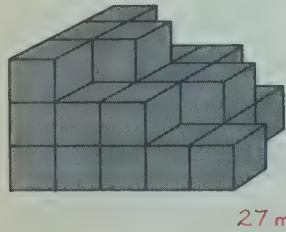
27 m^3

3.



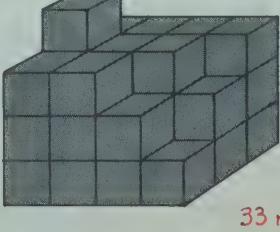
19 m^3

4.



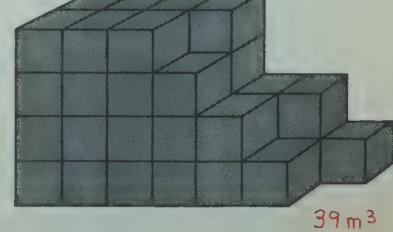
27 m^3

5.



33 m^3

6.



39 m^3

Is it smaller or larger than a cubic metre?

7. your kitchen

larger

8. the kitchen oven

smaller

9. the refrigerator

larger

Practice

Perform the indicated operation.

$$\begin{array}{r} 816 \\ 273 \\ + 549 \\ \hline 1638 \end{array}$$

$$\begin{array}{r} 7.61 \\ - 3.72 \\ \hline 3.89 \end{array}$$

$$3. \quad \begin{array}{r} 637 \\ \times 3 \\ \hline 1911 \end{array}$$

$$4. \quad \begin{array}{r} 70 \\ 6 \overline{)420} \end{array}$$

$$\begin{array}{r} \$9.02 \\ - 3.65 \\ \hline \$5.37 \end{array}$$

$$\begin{array}{r} 6. \quad 0.8 \\ \times \quad 6 \\ \hline 4.8 \end{array}$$

$$7. \underline{9)54^6}$$

$$\begin{array}{r} 8. \ \$7.35 \\ \times \quad 4 \\ \hline \$29.40 \end{array}$$

$$\begin{array}{r} 6.19 \\ + 7.33 \\ \hline 13.52 \end{array}$$

$$\begin{array}{r} 10. \quad 2002 \\ - 714 \\ \hline 1288 \end{array}$$

$$11.7 \times (46 + 31)$$

$$12. \quad 3 \times 8 \times 9$$

$$13. \quad 6.80 - 4.17$$

$$14. \quad 640 \div 8$$

$$15. \ 63 + 2140 + 832$$

$$16.8 \times 4.2$$

Solve. Show your work.

17. The quilt was made by sewing 5 rows of squares with 8 squares in each row. How many squares were used in the quilt? **40**

18. The 4 Maguire sisters agree to share equally the 280 newspapers they have to deliver. How many will each have? **70**

19. When Sian chose from the menu, she picked an appetizer for \$1.25. Her main course cost \$4.85. Her dessert cost \$1.10. What was the price of her meal? **\$7.20**

20. Nigel began the day with \$7.35. By noon he had spent \$2.80 on food. During the afternoon he spent \$1.54 for magazines. How much did he have at the end of the day? **\$3.01**

21. A shelf had to hold 8 boxes of about 3.5 kg each. How many kilograms did the shelf have to hold? **28 kg**

22. The sides of the garden measure 17 m, 41 m, 18 m, and 30 m. What is the perimeter? **106 m**

Multiplying Two-Digit Numbers

Multiply.

1.
$$\begin{array}{r} 37 \\ \times 5 \\ \hline 185 \end{array}$$

2.
$$\begin{array}{r} 39 \\ \times 4 \\ \hline 276 \end{array}$$

3.
$$\begin{array}{r} 82 \\ \times 6 \\ \hline 492 \end{array}$$

4.
$$\begin{array}{r} 57 \\ \times 3 \\ \hline 171 \end{array}$$

5.
$$\begin{array}{r} 38 \\ \times 3 \\ \hline 114 \end{array}$$

6.
$$\begin{array}{r} 94 \\ \times 5 \\ \hline 470 \end{array}$$

7.
$$\begin{array}{r} 27 \\ \times 4 \\ \hline 108 \end{array}$$

8.
$$\begin{array}{r} 85 \\ \times 7 \\ \hline 595 \end{array}$$

9.
$$\begin{array}{r} 91 \\ \times 8 \\ \hline 728 \end{array}$$

10.
$$\begin{array}{r} 52 \\ \times 5 \\ \hline 260 \end{array}$$

11.
$$\begin{array}{r} 40 \\ \times 4 \\ \hline 160 \end{array}$$

12.
$$\begin{array}{r} 93 \\ \times 9 \\ \hline 837 \end{array}$$

13.
$$\begin{array}{r} 67 \\ \times 2 \\ \hline 134 \end{array}$$

14.
$$\begin{array}{r} 42 \\ \times 3 \\ \hline 126 \end{array}$$

15.
$$\begin{array}{r} 8 \times 28 \\ \hline 224 \end{array}$$

16.
$$\begin{array}{r} 6 \times 17 \\ \hline 102 \end{array}$$

17.
$$\begin{array}{r} 9 \times 74 \\ \hline 666 \end{array}$$

Practice

Solve. Show your work.

1. Rolf won the race in 12.8 s. Jorge was 1.3 s slower. How long did it take Jorge to run the race? 14.1 s
2. I can get 25 pennies for one quarter. How many pennies can I get for 7 quarters? 175
3. Sylvia bought 5 packages of hamburger. The labels showed that each package held 1.6 kg. How much hamburger did Sylvia buy? 8 kg
4. The show costs \$4.25 for mom and \$1.75 for me. How much do we need so that we can go to the show? $\$6.00$
5. Hart thought he had written about 3 paragraphs on each page, 6 pages for each chapter, and 12 chapters for the book. About how many paragraphs would this be for the book? 216
6. How many eggs are there in 9 dozen? 108

Multiplying Three-Digit Numbers

Multiply.

1. $\begin{array}{r} \overset{2}{6} \overset{2}{8} 9 \\ \times 3 \\ \hline 2067 \end{array}$	2. $\begin{array}{r} \overset{2}{4} 7 1 \\ \times 4 \\ \hline 1884 \end{array}$	3. $\begin{array}{r} 459 \\ \times 2 \\ \hline 918 \end{array}$	4. $\begin{array}{r} 405 \\ \times 7 \\ \hline 2835 \end{array}$	5. $\begin{array}{r} 356 \\ \times 5 \\ \hline 1780 \end{array}$
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6. $\begin{array}{r} 835 \\ \times 4 \\ \hline 3340 \end{array}$	7. $\begin{array}{r} 703 \\ \times 3 \\ \hline 2109 \end{array}$	8. $\begin{array}{r} 593 \\ \times 8 \\ \hline 4744 \end{array}$	9. $\begin{array}{r} 610 \\ \times 6 \\ \hline 3660 \end{array}$	10. $\begin{array}{r} 176 \\ \times 9 \\ \hline 1584 \end{array}$
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11. $\begin{array}{r} 527 \\ \times 6 \\ \hline 3162 \end{array}$	12. $\begin{array}{r} 719 \\ \times 7 \\ \hline 5033 \end{array}$	13. $\begin{array}{r} 296 \\ \times 4 \\ \hline 1184 \end{array}$	14. $\begin{array}{r} 384 \\ \times 9 \\ \hline 3456 \end{array}$	15. $\begin{array}{r} 209 \\ \times 5 \\ \hline 1045 \end{array}$
---	---	---	---	---

16. $\begin{array}{r} 274 \\ \times 8 \\ \hline 2192 \end{array}$	17. $\begin{array}{r} 145 \\ \times 3 \\ \hline 435 \end{array}$	18. $\begin{array}{r} 687 \\ \times 2 \\ \hline 1374 \end{array}$	19. $\begin{array}{r} 823 \\ \times 7 \\ \hline 5761 \end{array}$	20. $\begin{array}{r} 349 \\ \times 6 \\ \hline 2094 \end{array}$
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Estimating Products

Round the two-digit factors to the nearest ten.
 Round the three-digit factors to the nearest hundred.
 Then multiply to estimate each product.

1. $\begin{array}{r} 78 \quad 80 \\ \times 4 \quad 4 \\ \hline 320 \end{array}$	2. $\begin{array}{r} 284 \quad 300 \\ \times 6 \quad 6 \\ \hline 1800 \end{array}$	3. $\begin{array}{r} 57 \\ \times 2 \\ \hline 120 \end{array}$	4. $\begin{array}{r} 479 \\ \times 5 \\ \hline 2500 \end{array}$
---	--	--	--

5. $\begin{array}{r} 37 \\ \times 9 \\ \hline 360 \end{array}$	6. $\begin{array}{r} 28 \\ \times 3 \\ \hline 90 \end{array}$	7. $\begin{array}{r} 93 \\ \times 4 \\ \hline 360 \end{array}$	8. $\begin{array}{r} 55 \\ \times 7 \\ \hline 420 \end{array}$
--	---	--	--

9. $\begin{array}{r} 467 \\ \times 8 \\ \hline 4000 \end{array}$	10. $\begin{array}{r} 91 \\ \times 9 \\ \hline 810 \end{array}$	11. $\begin{array}{r} 62 \\ \times 2 \\ \hline 120 \end{array}$	12. $\begin{array}{r} 708 \\ \times 5 \\ \hline 3500 \end{array}$
--	---	---	---

13. $\begin{array}{r} 129 \\ \times 7 \\ \hline 700 \end{array}$	14. $\begin{array}{r} 37 \\ \times 6 \\ \hline 240 \end{array}$	15. $\begin{array}{r} 643 \\ \times 3 \\ \hline 1800 \end{array}$	16. $\begin{array}{r} 189 \\ \times 8 \\ \hline 1600 \end{array}$
--	---	---	---

Practice

Perform the indicated operation.

1.
$$\begin{array}{r} 13.91 \\ + 4.73 \\ \hline 18.64 \end{array}$$

2.
$$\begin{array}{r} \$8.61 \\ - 3.43 \\ \hline \$5.18 \end{array}$$

3.
$$\begin{array}{r} 7.6 \\ \times 5 \\ \hline 38 \end{array}$$

4.
$$\begin{array}{r} 70 \\ 7)490 \\ \hline 49 \\ 0 \end{array}$$

5.
$$\begin{array}{r} 12.07 \\ - 3.94 \\ \hline 8.13 \end{array}$$

6.
$$\begin{array}{r} \$875 \\ \times 6 \\ \hline \$5250 \end{array}$$

7.
$$\begin{array}{r} 207 \\ 914 \\ + 683 \\ \hline 1804 \end{array}$$

8.
$$\begin{array}{r} 5001 \\ - 426 \\ \hline 4575 \end{array}$$

9.
$$\begin{array}{r} 60 \\ 8)480 \\ \hline 48 \\ 0 \end{array}$$

10.
$$\begin{array}{r} 348 \\ \times 6 \\ \hline 2088 \end{array}$$

11.
$$3 \times (46 - 27)$$

57

12.
$$8 \times 3 \times 2 \times 7$$

336

13.
$$\$467 + \$219 + \$83$$

\$769

14.
$$27 \div 3$$
 9

15.
$$9 \times 1.6$$

14.4

16.
$$4039 - 2777$$

1262

Solve. Show your work.

 17. John found three good paperbacks at the book store. They cost \$2.25, \$1.95 and \$0.89. How much did all three cost? $\$5.09$

 18. An egg crate holds 8 layers, each with 72 eggs. How many eggs does the crate hold? 576

 19. The tourist bureau gave 400 maps to Memorial School. The 8 classes will share them equally. How many will each class get? 50

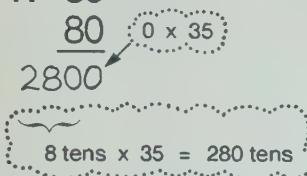
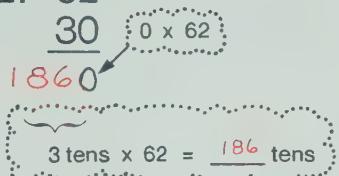
 20. When Lief put his toy train together, he used an engine which is 3.7 cm long and 3 cars each 2.9 cm long. How long is the train? 12.4 cm

 21. A bicycle tour was planned so that 1000 km would be travelled in 8 d. After 7 d, the bicyclists had travelled 775 km, having to stay indoors for one day because of bad weather. How many kilometres remained to be travelled? 225 km

 22. Mr. Zitzsperger has a chance to take his 4 children along on a business trip. Air fare for each would be \$128. How much would it cost to take the 4 children along? $\$512$

Multiplying Two-Digit Numbers by Multiples of Ten

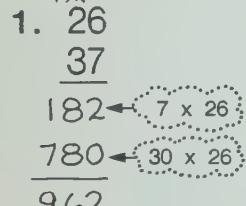
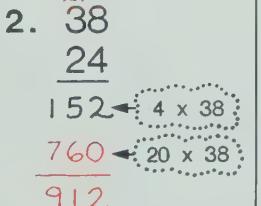
Multiply.

1. $\begin{array}{r} 35 \\ \times 80 \\ \hline 2800 \end{array}$ 	2. $\begin{array}{r} 62 \\ \times 30 \\ \hline 1860 \end{array}$ 	3. $\begin{array}{r} 48 \\ \times 50 \\ \hline 2400 \end{array}$	4. $\begin{array}{r} 13 \\ \times 70 \\ \hline 910 \end{array}$
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5. $\begin{array}{r} 47 \\ \times 20 \\ \hline 940 \end{array}$	6. $\begin{array}{r} 28 \\ \times 60 \\ \hline 1680 \end{array}$	7. $\begin{array}{r} 73 \\ \times 40 \\ \hline 2920 \end{array}$	8. $\begin{array}{r} 85 \\ \times 30 \\ \hline 2550 \end{array}$	9. $\begin{array}{r} 98 \\ \times 80 \\ \hline 7840 \end{array}$
10. $\begin{array}{r} 24 \\ \times 40 \\ \hline 960 \end{array}$	11. $\begin{array}{r} 63 \\ \times 90 \\ \hline 5670 \end{array}$	12. $\begin{array}{r} 56 \\ \times 60 \\ \hline 3360 \end{array}$	13. $\begin{array}{r} 79 \\ \times 70 \\ \hline 5530 \end{array}$	14. $\begin{array}{r} 87 \\ \times 50 \\ \hline 4350 \end{array}$

Multiplying Two-Digit Numbers by Two-Digit Numbers

Multiply.

1. $\begin{array}{r} 26 \\ \times 37 \\ \hline 182 \\ 780 \\ \hline 962 \end{array}$ 	2. $\begin{array}{r} 38 \\ \times 24 \\ \hline 152 \\ 760 \\ \hline 912 \end{array}$ 	3. $\begin{array}{r} 43 \\ \times 83 \\ \hline 3569 \end{array}$	4. $\begin{array}{r} 59 \\ \times 19 \\ \hline 1121 \end{array}$	5. $\begin{array}{r} 76 \\ \times 45 \\ \hline 3420 \end{array}$
---	---	--	--	--

6. $\begin{array}{r} 17 \\ \times 36 \\ \hline 612 \end{array}$	7. $\begin{array}{r} 85 \\ \times 19 \\ \hline 1615 \end{array}$	8. $\begin{array}{r} 38 \\ \times 47 \\ \hline 1786 \end{array}$	9. $\begin{array}{r} 46 \\ \times 25 \\ \hline 1150 \end{array}$	10. $\begin{array}{r} 72 \\ \times 34 \\ \hline 2448 \end{array}$
11. $\begin{array}{r} 80 \\ \times 68 \\ \hline 5440 \end{array}$	12. $\begin{array}{r} 95 \\ \times 23 \\ \hline 2185 \end{array}$	13. $\begin{array}{r} 48 \\ \times 35 \\ \hline 1680 \end{array}$	14. $\begin{array}{r} 63 \\ \times 52 \\ \hline 3276 \end{array}$	15. $\begin{array}{r} 47 \\ \times 79 \\ \hline 3713 \end{array}$

Multiplying Three-Digit Numbers by Multiples of Ten

Multiply.

1. $\begin{array}{r} \overset{2}{\cancel{1}} \\ 784 \\ \times 30 \\ \hline 23520 \\ \text{---} \\ 3 \text{ tens } \times 784 \end{array}$	2. $\begin{array}{r} \overset{1}{\cancel{4}} \\ 129 \\ \times 50 \\ \hline 6450 \\ \text{---} \\ 5 \text{ tens } \times 129 \end{array}$	3. $\begin{array}{r} 247 \\ \times 40 \\ \hline 9880 \end{array}$	4. $\begin{array}{r} 365 \\ \times 20 \\ \hline 7300 \end{array}$
---	--	---	---

5. $\begin{array}{r} 826 \\ \times 70 \\ \hline 57820 \end{array}$

6. $\begin{array}{r} 247 \\ \times 60 \\ \hline 14820 \end{array}$

7. $\begin{array}{r} 758 \\ \times 50 \\ \hline 37900 \end{array}$

8. $\begin{array}{r} 489 \\ \times 40 \\ \hline 19560 \end{array}$

9. $\begin{array}{r} 718 \\ \times 90 \\ \hline 64620 \end{array}$

10. $\begin{array}{r} 924 \\ \times 80 \\ \hline 73920 \end{array}$

11. $\begin{array}{r} 316 \\ \times 60 \\ \hline 18960 \end{array}$

12. $\begin{array}{r} 639 \\ \times 30 \\ \hline 19170 \end{array}$

13. $\begin{array}{r} 107 \\ \times 80 \\ \hline 8560 \end{array}$

14. $\begin{array}{r} 517 \\ \times 70 \\ \hline 36190 \end{array}$

Multiplying Three-Digit Numbers by Two-Digit Numbers

Multiply.

1. $\begin{array}{r} \overset{1}{\cancel{3}} \\ 314 \\ \times 29 \\ \hline 2826 \\ \text{---} \\ 6280 \\ \text{---} \\ 9106 \end{array}$	2. $\begin{array}{r} \overset{2}{\cancel{2}} \\ 268 \\ \times 63 \\ \hline 804 \\ \text{---} \\ 16080 \\ \text{---} \\ 16884 \end{array}$	3. $\begin{array}{r} 492 \\ \times 17 \\ \hline 8364 \end{array}$	4. $\begin{array}{r} 856 \\ \times 26 \\ \hline 22256 \end{array}$
--	---	---	--

5. $\begin{array}{r} 145 \\ \times 46 \\ \hline 6670 \end{array}$

6. $\begin{array}{r} 739 \\ \times 23 \\ \hline 16997 \end{array}$

7. $\begin{array}{r} 519 \\ \times 38 \\ \hline 19722 \end{array}$

8. $\begin{array}{r} 360 \\ \times 93 \\ \hline 33480 \end{array}$

9. $\begin{array}{r} 463 \\ \times 48 \\ \hline 22224 \end{array}$

10. $\begin{array}{r} 593 \\ \times 59 \\ \hline 34987 \end{array}$

11. $\begin{array}{r} 673 \\ \times 72 \\ \hline 48456 \end{array}$

12. $\begin{array}{r} 204 \\ \times 85 \\ \hline 17340 \end{array}$

13. $\begin{array}{r} 178 \\ \times 18 \\ \hline 3204 \end{array}$

14. $\begin{array}{r} 390 \\ \times 66 \\ \hline 25740 \end{array}$

Practice

Perform the indicated operation.

1.
$$\begin{array}{r} 305 \\ \times 7 \\ \hline 2135 \end{array}$$

2.
$$\begin{array}{r} 3.9 \\ + 6.8 \\ \hline 10.7 \end{array}$$

3.
$$\begin{array}{r} 481 \\ \times 30 \\ \hline 14430 \end{array}$$

4.
$$9\overline{)36}^4$$

5.
$$\begin{array}{r} \$10.08 \\ - 4.92 \\ \hline \$5.16 \end{array}$$

6.
$$\begin{array}{r} 218 \\ 763 \\ + 495 \\ \hline 1476 \end{array}$$

7.
$$\begin{array}{r} 28 \\ \times 65 \\ \hline 1820 \end{array}$$

8.
$$\begin{array}{r} \$12.97 \\ - 8.38 \\ \hline \$4.59 \end{array}$$

9.
$$9\overline{)540}^{60}$$

10.
$$\begin{array}{r} 285 \\ \times 43 \\ \hline 12255 \end{array}$$

11.
$$27 \times (238 - 146)$$

$$2484$$

12.
$$8 \times 9 \times 3 \times 7$$

$$1512$$

13.
$$40 \times 123$$

$$4920$$

14.
$$810 \div 9$$

$$90$$

15.
$$2718 - 945$$

$$1773$$

16.
$$\$486 + \$211 + \$573$$

$$\$1270$$

Solve. Show your work.

17. Three charter airplanes, each carrying 276 passengers, are leaving for a holiday in Montreal. How many passengers are on the airplanes? 828

18. Marcia went to the Fair with \$10.00. The train ticket cost \$2.47. The admission charge was \$1.50. How much did she have left to spend? $\$6.03$

19. Mrs. Filippelli was given 45 ticket books for her classes. Each book has 12 tickets. How many tickets is this in all? 540

20. 300 boys and girls are going to visit Upper Canada Village. Each bus holds 50 people. How many buses are needed? 6

21. The house has 38 windows. Each window has 12 panes of glass. How many panes is this? 456

22. The three girls running the legs of the relay had the following times: 6.7 s, 5.9 s, and 6.3 s. What is the total of these times? 18.9 s

Using Multiplication to Divide

DIVISION

Find the quotient and the remainder.

$$1. \ 6 \overline{)33} \quad \begin{matrix} 5 & R3 \\ 30 & \leftarrow 6 \times 5 \\ \hline 3 & \end{matrix}$$

$$2. \ 9 \overline{)68} \quad \begin{matrix} 7 & R5 \\ 63 & \leftarrow 9 \times 7 \\ \hline 5 & \end{matrix}$$

$$3. \ 3 \overline{)20} \quad \begin{matrix} 6 & R2 \\ 18 & \leftarrow 3 \times 6 \\ \hline 2 & \end{matrix}$$

$$4. \ 7 \overline{)38} \quad \begin{matrix} 5 & R3 \\ 35 & \leftarrow 7 \times 5 \\ \hline 3 & \end{matrix}$$

$$5. \ 4 \overline{)15} \quad \begin{matrix} 3 & R3 \\ 12 & \leftarrow 4 \times 3 \\ \hline 3 & \end{matrix}$$

$$6. \ 8 \overline{)59} \quad \begin{matrix} 7 & R3 \\ 56 & \leftarrow 8 \times 7 \\ \hline 3 & \end{matrix}$$

$$7. \ 2 \overline{)19} \quad \begin{matrix} 9 & R1 \\ 18 & \leftarrow 2 \times 9 \\ \hline 1 & \end{matrix}$$

$$8. \ 5 \overline{)42} \quad \begin{matrix} 8 & R2 \\ 40 & \leftarrow 5 \times 8 \\ \hline 2 & \end{matrix}$$

$$9. \ 8 \overline{)30} \quad \begin{matrix} 3 & R6 \\ 24 & \leftarrow 8 \times 3 \\ \hline 6 & \end{matrix}$$

$$10. \ 4 \overline{)30} \quad \begin{matrix} 7 & R2 \\ 28 & \leftarrow 4 \times 7 \\ \hline 2 & \end{matrix}$$

$$11. \ 7 \overline{)67} \quad \begin{matrix} 9 & R4 \\ 63 & \leftarrow 7 \times 9 \\ \hline 4 & \end{matrix}$$

$$12. \ 9 \overline{)53} \quad \begin{matrix} 5 & R8 \\ 45 & \leftarrow 9 \times 5 \\ \hline 8 & \end{matrix}$$

$$13. \ 6 \overline{)50} \quad \begin{matrix} 8 & R2 \\ 48 & \leftarrow 6 \times 8 \\ \hline 2 & \end{matrix}$$

$$14. \ 5 \overline{)36} \quad \begin{matrix} 7 & R1 \\ 35 & \leftarrow 5 \times 7 \\ \hline 1 & \end{matrix}$$

Practice

Solve. Show your work.

- Sixteen contestants are entered in each of the 8 divisions of the tournament. How many have entered the tournament? **128**
- Curtis has to bicycle 1.8 km to visit Luke. From Luke's to Fran's it is 2.2 km. From Fran's to Jeremy's it is 1.7 km. How far must Curtis bicycle to visit all three friends? **5.7 km**
- An excursion fare to Ireland is \$435 return. Mr. O'Leary bought 17 seats for his travel agency. What did this cost? **\$7395**

- The temperature in the electric furnace is 875°C. When it cools 180°, Professor O'Day will open it. At what temperature will it be then? **695°C**
- The 63 student visitors from Mexico are to be carried from the airport in 9 vans. The same number are to be carried in each of the vans. How many should each van carry? **7**
- A full 747 airliner can carry 428 passengers. The smaller 727 carries only 144. How many more people can the 747 carry? **284**

Sharing Tens

Divide.

1. $2\overline{)60}$

$$\begin{array}{r} 2 \\ \times 3 \text{ tens} = 6 \text{ tens} \end{array}$$

2. $3\overline{)90}$

$$\begin{array}{r} 3 \\ \times 3 \text{ tens} = 9 \text{ tens} \end{array}$$

3. $3\overline{)60}$

4. $6\overline{)10}$

5. $7\overline{)70}$

6. $4\overline{)80}$

7. $5\overline{)50}$

8. $2\overline{)20}$

9. $2\overline{)40}$

10. $3\overline{)30}$

11. $2\overline{)30}$

12. $8\overline{)10}$

Sharing Tens and Ones

Divide.

1. $4\overline{)84}$

2. $3\overline{)96}$

3. $2\overline{)34}$

4. $6\overline{)11}$

5. $2\overline{)43}$

6. $4\overline{)12}$

7. $3\overline{)23}$

8. $4\overline{)21}$

9. $2\overline{)44}$

10. $3\overline{)31}$

11. $7\overline{)11}$

12. $3\overline{)12}$

13. $4\overline{)22}$

14. $2\overline{)42}$

Sharing Hundreds, Tens, and Ones

Divide.

$$\begin{array}{r} 2 \\ \overline{)684} \\ 300 \quad \rightarrow 342 \\ \underline{600} \\ 84 \\ 80 \quad \rightarrow 2 \times 40 \\ \underline{4} \\ 4 \quad \rightarrow 2 \times 2 \\ \hline 0 \end{array}$$

Note: The first two digits of the dividend are grouped as 300, and the remainder 84 is grouped as 2 x 40. The final remainder 4 is grouped as 2 x 2.

$$\begin{array}{r} 3 \\ \overline{)936} \\ 900 \quad \rightarrow 312 \\ \underline{900} \\ 36 \\ 30 \\ \underline{6} \\ 6 \\ \hline 0 \end{array}$$

Note: The first three digits of the dividend are grouped as 900, and the remainder 36 is grouped as 3 x 10. The final remainder 6 is grouped as 2 x 3.

$$\begin{array}{r} 4 \\ \overline{)480} \\ 120 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 2 \\ \overline{)286} \\ 143 \\ \hline 0 \end{array}$$

$$5. \ 3 \overline{)366} \quad \frac{122}{\text{}} \quad \text{Note: } 36 \rightarrow 3 \times 10$$

$$6. \ 6 \overline{)660} \quad \frac{110}{\text{}} \quad \text{Note: } 66 \rightarrow 6 \times 10$$

$$7. \ 4 \overline{)844} \quad \frac{211}{\text{}} \quad \text{Note: } 84 \rightarrow 4 \times 20$$

$$8. \ 2 \overline{)842} \quad \frac{421}{\text{}} \quad \text{Note: } 84 \rightarrow 2 \times 40$$

$$9. \ 3 \overline{)693} \quad \frac{231}{\text{}} \quad \text{Note: } 69 \rightarrow 3 \times 20$$

Regrouping Tens

Divide.

$$\begin{array}{r} 3 \\ \overline{)75} \\ 60 \quad \rightarrow 3 \times 20 \\ \underline{60} \\ 15 \\ 15 \quad \rightarrow 3 \times 5 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 2 \\ \overline{)94} \\ 80 \quad \rightarrow 2 \times 40 \\ \underline{80} \\ 14 \\ 14 \\ \hline 0 \end{array}$$

$$3. \ 4 \overline{)52} \quad \frac{13}{\text{}}$$

$$4. \ 3 \overline{)87} \quad \frac{29}{\text{}}$$

$$5. \ 2 \overline{)56} \quad \frac{28}{\text{}}$$

$$6. \ 7 \overline{)98} \quad \frac{14}{\text{}}$$

$$7. \ 5 \overline{)70} \quad \frac{14}{\text{}}$$

$$8. \ 6 \overline{)84} \quad \frac{14}{\text{}}$$

$$9. \ 4 \overline{)72} \quad \frac{18}{\text{}}$$

Practice

Perform the indicated operation.

$$\begin{array}{r} 8.35 \\ - 4.78 \\ \hline 3.57 \end{array}$$

$$\begin{array}{r} \$2.18 \\ + 9.75 \\ \hline \$11.93 \end{array}$$

$$\begin{array}{r} 23 \\ 2 \overline{) 46 } \end{array}$$

$$\begin{array}{r} 231 \\ 3 \overline{) 693 } \end{array}$$

$$\begin{array}{r} 286 \\ \times 7 \\ \hline 2002 \end{array}$$

$$\begin{array}{r} 72 \\ \times 48 \\ \hline 3456 \end{array}$$

$$\begin{array}{r} \$4286 \\ + 5192 \\ \hline \$9478 \end{array}$$

$$\begin{array}{r} 12 \\ 7 \overline{) 84 } \end{array}$$

$$\begin{array}{r} \$8.62 \\ \times 8 \\ \hline \$68.96 \end{array}$$

$$\begin{array}{r} 402 \\ - 86 \\ \hline 316 \end{array}$$

$$\begin{array}{r} 57 \div 3 \\ 19 \end{array}$$

$$\begin{array}{r} 17 \times 258 \\ 4386 \end{array}$$

$$\begin{array}{r} 76 \div 4 \\ 19 \end{array}$$

$$\begin{array}{r} 2117 - 840 \\ 1277 \end{array}$$

$$\begin{array}{r} (219 - 187) \times 24 \\ 768 \end{array}$$

$$\begin{array}{r} 6 \times (4.7 + 9.3) \\ 84.0 \end{array}$$

$$\begin{array}{r} 3 \times 8 \times 9 \times 7 \\ 1512 \end{array}$$

Solve. Show your work.

18. What is the perimeter of a triangular city block whose sides are 217 m, 421 m, and 364 m? *1002 m*

20. The January blizzard left 78.4 cm of snow in Regina. By the weekend, the level was down to 49.8 cm. How much snow had melted? *28.6 cm*

22. The inside of the movie theatre was long and narrow. It had 38 rows of seats, but only 8 seats in each row. How many seats were in the theatre? *304*

19. How many eggs are there in 16 dozen? *192*

21. Each of 6 boys raised the same amount for the project. The total amount was \$96. How much did each boy raise? *\$16*

23. When Mrs. Potts ordered furniture for the school, the price was \$2785. The discount to the school was \$496. How much did the school have to pay? *\$2289*

Sharing Hundreds, Regrouping Tens

Divide.

$$\begin{array}{r}
 8 \\
 40 \\
 200 \\
 \hline
 1. 2)496 \\
 400 \leftarrow 2 \times 200 \\
 \hline
 96 \\
 80 \leftarrow 2 \times 40 \\
 \hline
 16 \\
 16 \leftarrow 2 \times 8 \\
 \hline
 0
 \end{array} \rightarrow 248$$

$$\begin{array}{r}
 3 \\
 10 \\
 200 \\
 \hline
 2. 4)852 \\
 800 \leftarrow 4 \times 200 \\
 \hline
 52 \\
 40 \\
 \hline
 12 \\
 12 \\
 \hline
 0
 \end{array} \rightarrow 213$$

$$3. 3)687 \rightarrow 229$$

$$4. 7)791 \rightarrow 113$$

$$5. 3)951 \rightarrow 317$$

$$6. 4)472 \rightarrow 118$$

$$7. 2)652 \rightarrow 326$$

$$8. 3)375 \rightarrow 125$$

$$9. 4)892 \rightarrow 223$$

Regrouping Hundreds

Divide.

$$\begin{array}{r}
 2 \\
 60 \\
 \hline
 1. 4)248 \\
 240 \leftarrow 4 \times 60 \\
 \hline
 8 \\
 8 \leftarrow 4 \times 2 \\
 \hline
 0
 \end{array} \rightarrow 62$$

$$\begin{array}{r}
 3 \\
 90 \\
 \hline
 2. 2)186 \\
 180 \leftarrow 2 \times 90 \\
 \hline
 6 \\
 6 \\
 \hline
 0
 \end{array} \rightarrow 93$$

$$3. 3)186 \rightarrow 62$$

$$4. 7)287 \rightarrow 41$$

$$5. 5)455 \rightarrow 91$$

$$6. 6)186 \rightarrow 31$$

$$7. 3)216 \rightarrow 72$$

$$8. 8)568 \rightarrow 71$$

$$9. 9)729 \rightarrow 81$$

Regrouping Hundreds, Regrouping Tens

Divide.

$$\begin{array}{r}
 & 9 \\
 & 40 \\
 100 & \leftarrow 149 \text{ R1} \\
 \hline
 1. 3)448 & \\
 300 & \leftarrow 3 \times 100 \\
 \hline
 148 & \\
 120 & \leftarrow 3 \times 40 \\
 \hline
 28 & \\
 27 & \leftarrow 3 \times 9 \\
 \hline
 1 &
 \end{array}$$

$$\begin{array}{r}
 & 7 \\
 & 90 \\
 300 & \leftarrow 397 \text{ R1} \\
 \hline
 2. 2)795 & \\
 600 & \leftarrow 2 \times 300 \\
 \hline
 195 & \\
 180 & \\
 \hline
 15 & \\
 14 & \\
 \hline
 1 &
 \end{array}$$

$$\begin{array}{r}
 & 239 \text{ R2} \\
 3. 4)958 & \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 & 136 \\
 4. 7)952 & \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 & 123 \\
 5. 8)984 & \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 & 148 \text{ R4} \\
 6. 6)892 & \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 & 245 \text{ R2} \\
 7. 3)737 & \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 & 475 \\
 8. 2)950 & \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 & 73 \text{ R6} \\
 9. 9)663 & \\
 \hline
 \end{array}$$

Finding an Average

Divide to find an average for each.

$$\begin{array}{l}
 1. 6 \text{ pairs} \\
 \text{of shoes} \\
 \text{cost \$210.} \\
 \text{The average} \\
 \text{cost} \\
 \text{is \$35.}
 \end{array}
 \begin{array}{r}
 & 5 \\
 & 30 \\
 6)210 & \leftarrow 35 \\
 180 & \\
 \hline
 30 & \\
 30 & \\
 \hline
 0 &
 \end{array}$$

$$\begin{array}{l}
 2. 189 \text{ points} \\
 \text{were scored in} \\
 \text{9 football games.} \\
 \text{The average number} \\
 \text{scored each game} \\
 \text{was 21.}
 \end{array}
 \begin{array}{r}
 & 1 \\
 & 20 \\
 9)189 & \leftarrow 21 \\
 180 & \\
 \hline
 9 & \\
 9 & \\
 \hline
 0 &
 \end{array}$$

$$\begin{array}{l}
 3. 280 \text{ children} \\
 \text{rode on} \\
 \text{5 buses.} \\
 \text{The average number} \\
 \text{on each bus} \\
 \text{was 56.}
 \end{array}
 \begin{array}{r}
 & 56 \\
 & 56 \\
 5)280 & \\
 25 & \\
 \hline
 30 & \\
 30 & \\
 \hline
 0 &
 \end{array}$$

$$\begin{array}{l}
 4. 105 \text{ nightcrawlers} \\
 \text{were found} \\
 \text{in 7 nights.}
 \end{array}
 \begin{array}{r}
 & 15 \\
 & 15 \\
 7)105 & \\
 70 & \\
 \hline
 35 & \\
 35 & \\
 \hline
 0 &
 \end{array}$$

The average number found each night was 15.

$$\begin{array}{l}
 5. 280 \text{ sandwiches} \\
 \text{were ordered} \\
 \text{by the 8 classes.}
 \end{array}
 \begin{array}{r}
 & 35 \\
 & 35 \\
 8)280 & \\
 240 & \\
 \hline
 40 & \\
 40 & \\
 \hline
 0 &
 \end{array}$$

The average number ordered by each class was 35.

$$\begin{array}{l}
 6. \text{In 3 h, the} \\
 \text{telethon received} \\
 \text{825 pledges.}
 \end{array}
 \begin{array}{r}
 & 275 \\
 & 275 \\
 3)825 & \\
 6 & \\
 \hline
 22 & \\
 21 & \\
 \hline
 15 & \\
 15 & \\
 \hline
 0 &
 \end{array}$$

The average number of pledges each hour was 275.

A Shorter Form for Division

Divide.

$$1. \ 7 \overline{)365} \quad \begin{array}{r} 52 \text{ R1} \\ 365 \\ -350 \\ \hline 15 \\ -14 \\ \hline 1 \end{array}$$

$350 \leftarrow 7 \times 50$

$14 \leftarrow 7 \times 2$

$$2. \ 6 \overline{)456} \quad \begin{array}{r} 76 \\ 456 \\ -420 \\ \hline 36 \\ -36 \\ \hline 0 \end{array}$$

$420 \leftarrow 6 \times 70$

$$3. \ 2 \overline{)305} \quad \begin{array}{r} 152 \text{ R1} \\ 305 \\ -20 \\ \hline 105 \\ -100 \\ \hline 5 \end{array}$$

$$4. \ 3 \overline{)801} \quad \begin{array}{r} 267 \\ 801 \\ -60 \\ \hline 201 \\ -18 \\ \hline 21 \end{array}$$

$$5. \ 8 \overline{)167} \quad \begin{array}{r} 20 \text{ R7} \\ 167 \\ -160 \\ \hline 7 \end{array}$$

$$6. \ 5 \overline{)438} \quad \begin{array}{r} 87 \text{ R3} \\ 438 \\ -40 \\ \hline 38 \\ -35 \\ \hline 3 \end{array}$$

$$7. \ 7 \overline{)125} \quad \begin{array}{r} 17 \text{ R6} \\ 125 \\ -70 \\ \hline 55 \\ -49 \\ \hline 6 \end{array}$$

$$8. \ 4 \overline{)236} \quad \begin{array}{r} 59 \\ 236 \\ -20 \\ \hline 36 \\ -36 \\ \hline 0 \end{array}$$

$$9. \ 9 \overline{)350} \quad \begin{array}{r} 38 \text{ R8} \\ 350 \\ -36 \\ \hline 10 \\ -9 \\ \hline 10 \\ -9 \\ \hline 1 \end{array}$$

$$10. \ 8 \overline{)428} \quad \begin{array}{r} 53 \text{ R4} \\ 428 \\ -40 \\ \hline 28 \\ -24 \\ \hline 4 \end{array}$$

$$11. \ 4 \overline{)104} \quad \begin{array}{r} 26 \\ 104 \\ -8 \\ \hline 24 \\ -24 \\ \hline 0 \end{array}$$

$$12. \ 3 \overline{)456} \quad \begin{array}{r} 152 \\ 456 \\ -30 \\ \hline 156 \\ -15 \\ \hline 6 \end{array}$$

$$13. \ 5 \overline{)285} \quad \begin{array}{r} 57 \\ 285 \\ -25 \\ \hline 35 \\ -35 \\ \hline 0 \end{array}$$

$$14. \ 6 \overline{)839} \quad \begin{array}{r} 139 \text{ R5} \\ 839 \\ -60 \\ \hline 239 \\ -120 \\ \hline 119 \\ -114 \\ \hline 5 \end{array}$$

Practice

Solve. Show your work.

- Yuri's scores on 7 tests totalled 595 points. What was his average score? **85**
- Each train ticket costs \$42. The club needs 27 tickets. How much will they cost? **\$1134**
- The restaurant spent \$2348 for labor, \$1941 for food, and \$3728 for other expenses this month. What was its total cost? **\$8017**
- Judd began his jewellery project with 76.8 cm of silver wire. There were 57.9 cm when he finished. How much wire did he use? **18.9 cm**
- A cucumber is 20.9 cm long. Yesterday it was 17.6 cm long. How much did it grow in one day? **3.3 cm**
- When 516 school children are divided as evenly as possible into 8 groups, how many will each group have? **4 groups will have 64 and 4 groups will have 65.**

Practice

Perform the indicated operation.

1.
$$\begin{array}{r} 3.64 \\ + 7.28 \\ \hline 10.92 \end{array}$$

2.
$$\begin{array}{r} 60 \\ \times 7 \\ \hline 420 \end{array}$$

3.
$$\begin{array}{r} \$11.94 \\ - 3.27 \\ \hline \$8.67 \end{array}$$

4.
$$\begin{array}{r} 104 \\ 4)416 \\ \hline 16 \\ 16 \\ \hline 0 \end{array}$$

5.
$$\begin{array}{r} 648 \\ \times 27 \\ \hline 17496 \end{array}$$

6.
$$\begin{array}{r} 803 \\ - 75 \\ \hline 728 \end{array}$$

7.
$$\begin{array}{r} 2184 \\ 906 \\ + 1375 \\ \hline 4465 \end{array}$$

8.
$$\begin{array}{r} 67 \\ 4)268 \\ \hline 16 \\ 108 \\ 108 \\ \hline 0 \end{array}$$

9.
$$\begin{array}{r} 26\text{ R}7 \\ 8)215 \\ \hline 16 \\ 55 \\ 56 \\ \hline 7 \end{array}$$

10.
$$\begin{array}{r} 7.8 \\ - 2.9 \\ \hline 4.9 \end{array}$$

11.
$$\begin{array}{r} 420 \div 7 \\ 60 \\ \hline 0 \end{array}$$

12.
$$\begin{array}{r} 83 \times 41 \\ 3403 \\ \hline 0 \end{array}$$

13.
$$\begin{array}{r} \$621 + \$842 + \$917 \\ \$2380 \\ \hline 0 \end{array}$$

14.
$$\begin{array}{r} 4.73 - 2.68 \\ 2.05 \\ \hline 0 \end{array}$$

15.
$$\begin{array}{r} 2 \times 8 \times 40 \\ 640 \\ \hline 0 \end{array}$$

16.
$$\begin{array}{r} 416 \div (2.3 + 4.7) \\ 59\text{ R}3 \\ \hline 0 \end{array}$$

Solve. Show your work.

17. Ariana and her friend are going on a ski trip. Each will rent equipment for \$7.95, buy lift tickets for \$12.50, and pay driving costs of \$8.55. What will the trip cost each girl? $\$29.00$

19. The petition had 315 pages with 32 names on each page. How many names were on the petition? $10\,080$

21. At noon the temperature was 31.3°C . By evening it was 27.6°C . How much did it drop? 3.7°C

18. Mrs. Diamantopoulos baked 350 pastries. She wrapped 8 to a paper plate for the bake sale. How many plates did she fill? 43

20. The card has a length of 7.5 cm and a width of 5.2 cm. What is its perimeter? 25.4 cm

22. The children lined up in 7 rows of 45 each. How many children were there? 315

Small Amounts

Would you measure length, capacity, mass, or time?

1. How much cough syrup is in a spoon? <i>capacity</i>	2. How light is a maple leaf? <i>mass</i>	3. How long is the beak of a chicken? <i>length</i>
4. How long does it take to fall to the ground? <i>time</i>	5. How much water is in an eye dropper? <i>capacity</i>	6. How much ribbon is on a spool? <i>length</i>
7. How far does a snail crawl? <i>length</i>	8. How long does it take to start a car? <i>time</i>	9. How much tea is in a tea bag? <i>mass</i>
10. How heavy is a bee? <i>mass</i>	11. How far does a bee travel? <i>length</i>	12. How much honey is in a bee hive? <i>capacity</i> (<i>or mass</i>)
13. How long is a TV commercial? <i>time</i>	14. How thin is a human hair? <i>length</i>	15. How much of a load is the truck carrying? <i>mass</i> (<i>or capacity</i>)

Units of Time

Complete .

1. $1 \text{ min} = \underline{60} \text{ s}$	2. $7 \text{ min} = \underline{420} \text{ s}$	3. $400 \text{ d} = \underline{1} \text{ year } \underline{35} \text{ d}$
$1 \text{ h} = \underline{60} \text{ min}$		
$1 \text{ d} = \underline{24} \text{ h}$	4. $2 \text{ h } 8 \text{ min} = \underline{128} \text{ min}$	5. $50 \text{ h} = \underline{2} \text{ d } \underline{2} \text{ h}$
$1 \text{ week} = \underline{7} \text{ d}$		
$1 \text{ year} = \underline{365} \text{ d}$	6. $100 \text{ s} = \underline{1} \text{ min } \underline{40} \text{ s}$	7. $3 \text{ weeks } 2 \text{ d} = \underline{23} \text{ d}$

8. $3\text{ h} = \underline{180}$ min	9. $4\text{ d} = \underline{96}$ h
10. $150\text{ s} = \underline{2}$ min $\underline{30}$ s	11. $10\text{ weeks} = \underline{70}$ d
12. $2\text{ d } 12\text{ h} = \underline{60}$ h	13. $15\text{ d} = \underline{2}$ weeks $\underline{1}$ d
14. $130\text{ min} = \underline{2}$ h $\underline{10}$ min	15. $30\text{ h} = \underline{1}$ d $\underline{6}$ h
16. $4\text{ weeks } 3\text{ d} = \underline{31}$ d	17. $2\text{ years} = \underline{730}$ d

The 24-Hour Clock

What would a 12-hour clock show for

1. 20:30? 8:30 p.m.	2. 06:15? 6:15	3. 22:00? 10:00 p.m.
4. 01:30? 1:30 a.m.	5. 15:15? 3:15 p.m.	6. 12:45? 12:45 p.m.
7. 4 h later than 13:00? 5:00 p.m.	8. 2 h 30 min earlier than 10:45? 8:15 a.m.	9. 5 h 40 min later than 09:00? 2:40 p.m.

What would a 24-hour clock show for

10. 9:30 a.m.? 09:30	11. 7 p.m.? 19:00	12. 5:20 p.m.? 17:20
13. 9:05 p.m.? 21:05	14. 11:45 a.m.? 11:45	15. 12:30 a.m.? 00:30
16. 4 h later than 1 p.m.? 17:00	17. 2 h 30 min earlier than 10:45 a.m.? 08:15	18. 5 h 40 min later than 9 a.m.? 14:40

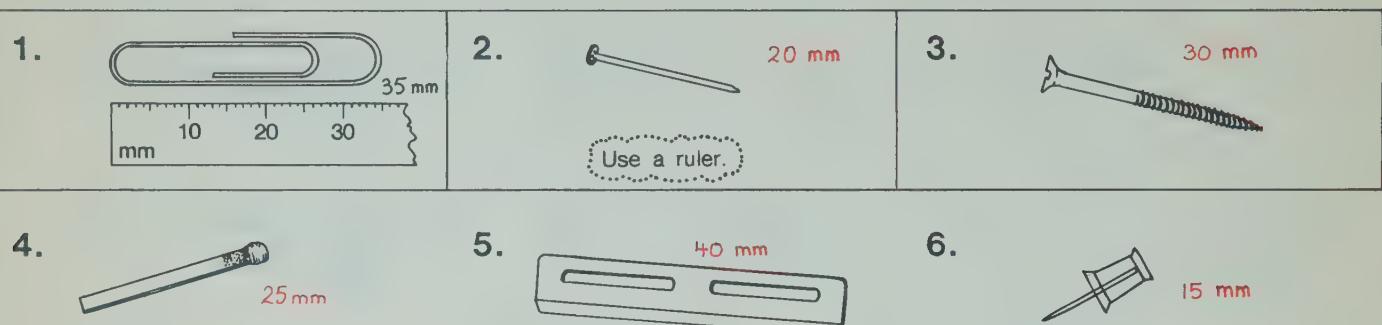
Practice

Solve. Show your work.

- The ferry boat has been bringing vacationers to the island. On two trips it was full with 280 passengers. On the third trip it had 217 passengers. How many did it carry in all? **777**
- The planners for the political rally expected 7500 people. Actually, 1785 fewer than this attended. How many came to the rally. **5715**
- The car rental people charged Mr. Berend 9¢/km. He drove 576 km. How much did this cost? **\$51.84**
- Pete's group began its hike at 10:15 a.m. The boys finished 2 h 20 min later. What time was it then? **12:35 p.m.**
- Aunt Matty left \$588 to her 3 nieces. They shared it equally. How much did each receive? **\$196**
- The plant's growth in the past 2 d was 4.19 cm and 6.78 cm. What was the total growth? **10.97 cm**

Length in Millimetres

Measure each in millimetres.



Choose the best estimate for

7. the diameter of a penny.

35 mm 20 mm 10 mm **20 mm**

8. the height of an ant.

1 mm 1 cm 15 mm **1 mm**

9. length of a front tooth.

1 mm 1 cm 100 mm **1 cm**

10. thickness of your ear lobe.

1 mm 1 cm 5 mm **5 mm**

Four Units of Length

Which unit, the millimetre, the centimetre, the metre, or the kilometre, is best for measuring

1. the length of a basketball court? metre	2. the distance from Halifax kilometre to Fredericton?	3. the thickness of a piece millimetre of cardboard?
4. the perimeter of a garden? metre	5. the length of an envelope? centimetre	6. the length of a dog's tail? centimetre
7. the length of the eye of a needle? millimetre	8. the length of a train ride? kilometre	9. the length of a train? metre

Choose the best estimate for

10. the length of a ski.

150 mm 150 cm 150 m **150cm**

11. the length of a piece of chalk.

80 mm 80 cm 80 km **80mm**

12. the height of a ceiling.

3 cm 3 m 3 km **3 m**

13. the length of a country road.

10 mm 10 m 10 km **10 km**

NAME _____

Practice

Would you measure length, capacity, mass, or time to find

1. how much milk a kitten drinks? *capacity*
2. how heavy a safety pin is? *mass*
3. how long to make a necklace? *time*
4. the thickness of a finger? *length*
5. the amount of water a sponge holds?
capacity
6. how long between blinks of an eye?
time

Complete.

7. $2 \text{ min} = \underline{120} \text{ s}$
8. $30 \text{ h} = \underline{1} \text{ d } \underline{6} \text{ h}$
9. $48 \text{ months} = \underline{4} \text{ years}$
10. $7 \text{ weeks} = \underline{49} \text{ d}$
11. $30 \text{ d} = \underline{4} \text{ weeks } \underline{2} \text{ d}$
12. $180 \text{ min} = \underline{3} \text{ h}$
13. $3 \text{ d } 8 \text{ h} = \underline{80} \text{ h}$
14. $1 \text{ year} = \underline{365} \text{ d}$

What would a 12-hour clock show for

15. $03:00?$ *3:00 a.m.*
16. $20:10?$ *8:10 p.m.*
17. $14:40?$ *2:40 p.m.*
18. $2 \text{ h } 30 \text{ min later than } 08:15?$ *10:45 a.m.*
19. $4 \text{ h } 20 \text{ min earlier than } 13:40?$ *9:20 a.m.*
20. $5 \text{ h } 25 \text{ min earlier than } 22:50?$ *5:25 p.m.*

What would a 24-hour clock show for

21. 12 noon? *12:00*
22. $7:15 \text{ a.m.?}$ *07:15*
23. $9:30 \text{ p.m.?}$ *21:30*
24. $3 \text{ h later than } 5:10 \text{ p.m.?}$ *20:10*
25. $2 \text{ h } 15 \text{ min earlier than } 1:30 \text{ p.m.?}$ *11:15*
26. $6 \text{ h } 10 \text{ min later than } 10:20 \text{ a.m.?}$ *16:30*

Use a ruler. Measure each in millimetres.

27.  45 mm 28.  65 mm

Which unit, the millimetre, the centimetre, the metre, or the kilometre, is best for measuring

29. the distance travelled by a hot-air balloon? *kilometre*
30. the length of an eyelash? *centimetre*
31. the height of a telephone pole? *metre*

Choose the best estimate for

32. the thickness of pencil lead.
33. the length of a hockey stick.

1 mm	5 mm	1 cm
------	------	------

1 mm

2 cm	2 m	2 km
------	-----	------

2 m

34. the height of a foot stool.

40 mm	40 cm	1 m
-------	-------	-----

40 cm

35. the width of a shoe.

8 mm	8 cm	80 cm
------	------	-------

8 cm

Capacity in Millilitres and Litres

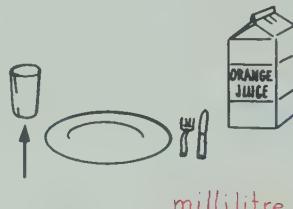
Which unit, the millilitre or the litre, is better for measuring the capacity of the following?

1.



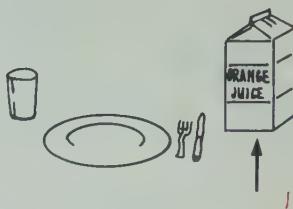
litre

2.



millilitre

3.



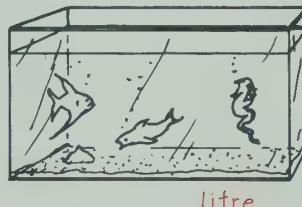
litre

4.



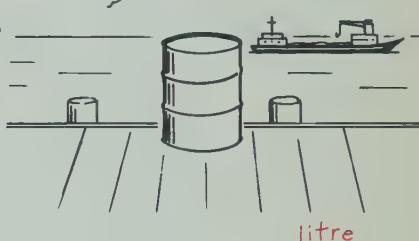
millilitre

5.



litre

6.



litre

Use mL or L to complete each sentence.

7. Justin squeezed 30 mL of juice from the orange.

8. Pamela added 2 L of antifreeze to the car radiator.

Mass in Grams and Kilograms

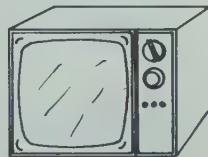
Which unit, the gram or the kilogram, is better for measuring the mass of the following?

1.



gram

2.



kilogram

3.



gram

4.



kilogram

5.



gram

6.



kilogram

Use g or kg to complete each sentence.

7. The box held 300 g of cereal.

8. Al's goal was to lose 1 kg each week.

Millilitres and Litres

Complete.

1. $5 \text{ L } 35 \text{ mL} = \underline{5035} \text{ mL}$

$$\begin{array}{c} \text{1L} \\ = 1000 \text{ mL} \end{array}$$

2. $7895 \text{ mL} = \underline{7} \text{ L } \underline{895} \text{ mL}$

$$\begin{array}{c} \text{1000 mL} \\ = 1 \text{ L} \end{array}$$

3. $3 \text{ L} = \underline{3000} \text{ mL}$

4. $6450 \text{ mL} = \underline{6} \text{ L } \underline{450} \text{ mL}$

5. $8 \text{ L} = \underline{8000} \text{ mL}$

6. $4000 \text{ mL} = \underline{4} \text{ L}$

7. $9000 \text{ mL} = \underline{9} \text{ L}$

8. $2 \text{ L} = \underline{2000} \text{ mL}$

9. $3500 \text{ mL} = \underline{3} \text{ L } \underline{500} \text{ mL}$

10. $4 \text{ L } 5 \text{ mL} = \underline{4005} \text{ mL}$

11. $5 \text{ L } 350 \text{ mL} = \underline{5350} \text{ mL}$

12. $1950 \text{ mL} = \underline{1} \text{ L } \underline{950} \text{ mL}$

13. $2050 \text{ mL} = \underline{2} \text{ L } \underline{50} \text{ mL}$

14. $3 \text{ L } 675 \text{ mL} = \underline{3675} \text{ mL}$

Grams and Kilograms

Complete.

1. $6208 \text{ g} = \underline{6} \text{ kg } \underline{208} \text{ g}$

$$\begin{array}{c} \text{1000 g} \\ = 1 \text{ kg} \end{array}$$

2. $4 \text{ kg } 500 \text{ g} = \underline{4500} \text{ g}$

$$\begin{array}{c} \text{1 kg} \\ = 1000 \text{ g} \end{array}$$

3. $2000 \text{ g} = \underline{2} \text{ kg}$

4. $7 \text{ kg } 50 \text{ g} = \underline{7050} \text{ g}$

5. $5000 \text{ g} = \underline{5} \text{ kg}$

6. $3 \text{ kg} = \underline{3000} \text{ g}$

7. $6 \text{ kg} = \underline{6000} \text{ g}$

8. $9000 \text{ g} = \underline{9} \text{ kg}$

9. $1 \text{ kg } 900 \text{ g} = \underline{1900} \text{ g}$

10. $4004 \text{ g} = \underline{4} \text{ kg } \underline{4} \text{ g}$

11. $3205 \text{ g} = \underline{3} \text{ kg } \underline{205} \text{ g}$

12. $8 \text{ kg } 25 \text{ g} = \underline{8025} \text{ g}$

13. $5 \text{ kg } 750 \text{ g} = \underline{5750} \text{ g}$

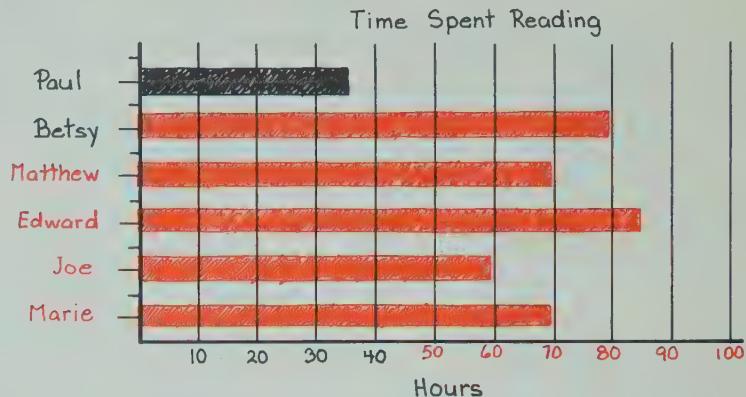
14. $2075 \text{ g} = \underline{2} \text{ kg } \underline{75} \text{ g}$

Working with Graphs

Draw a graph for the information in each exercise.

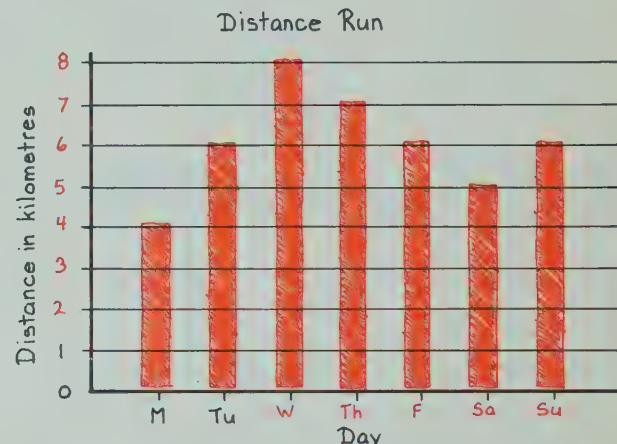
1. Time spent reading in one month

Paul	35 h
Betsy	80 h
Matthew	70 h
Edward	85 h
Joe	60 h
Marie	70 h



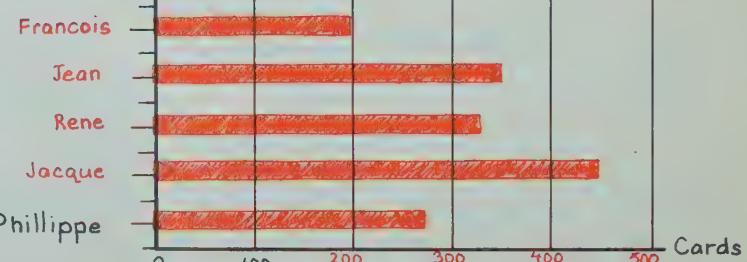
2. Distance run by Jan each day

Monday	4 km
Tuesday	6 km
Wednesday	8 km
Thursday	7 km
Friday	6 km
Saturday	5 km
Sunday	6 km



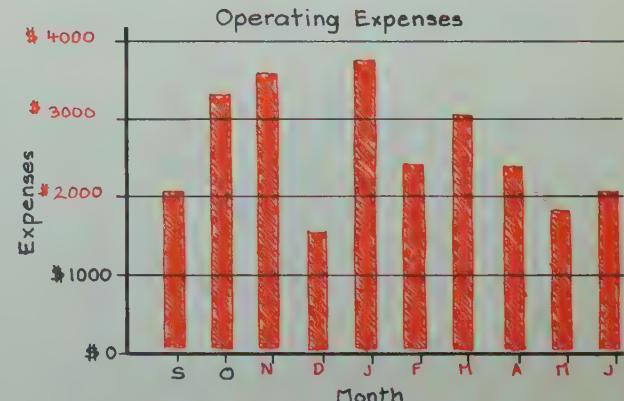
3. Number of hockey cards collected

Francois	200
Jean	350
Rene	325
Jacque	450
Phillippe	275



4. Operating expenses during school year

Sept.	\$2000	Feb.	\$2250
Oct.	\$3250	March	\$3000
Nov.	\$3500	April	\$2250
Dec.	\$1500	May	\$1750
Jan.	\$3750	June	\$2000



Practice

Perform the indicated operation.

$$\begin{array}{r} 13.78 \\ - 4.92 \\ \hline 8.86 \end{array}$$

$$\begin{array}{r} 231 \\ 868 \\ + 914 \\ \hline 2013 \end{array}$$

$$\begin{array}{r} 5.8 \\ \times 6 \\ \hline 34.8 \end{array}$$

$$\begin{array}{r} 423 \\ 2)846 \\ \hline \end{array}$$

$$\begin{array}{r} 60 \\ 7)420 \\ \hline \end{array}$$

$$\begin{array}{r} 728 \\ \times 14 \\ \hline 10192 \end{array}$$

$$\begin{array}{r} 1600 \\ - 908 \\ \hline 692 \end{array}$$

$$\begin{array}{r} \$ 2.07 \\ 18.21 \\ + 49.65 \\ \hline \$ 69.93 \end{array}$$

$$\begin{array}{r} 89 \\ 8)712 \\ \hline \end{array}$$

$$\begin{array}{r} 0.7 \\ \times 9 \\ \hline 6.3 \end{array}$$

$$11. (627 - 483) \times 26$$

3744

$$12. (897 - 147) \div 6$$

125

$$13. \$10.66 - \$7.82$$

\\$ 2.84

$$14. 284 + 815 + 76$$

1175

$$15. 41.28 + 16.94$$

58.22

$$16. 42 \times 863$$

36246

Solve. Show your work.

17. The large fuel tank holds 8235 L. The smaller one holds 1075 L. Together, how much do they hold? *9310 L*

18. The total mass of the 4 hogs on the pickup truck is 772 kg. What is their average mass? *193 kg*

19. The whole trip will be 1000 km. One day 274 km were covered. The next day 317 km were travelled. How many kilometres remain? *409*

20. Suzy watches the baker prepare muffins. Each pan contains 48 muffins. The pans are stacked 18 high on racks. How many muffins are on the racks? *864*

21. Six persons paint a house. They are paid \$500. The supplies cost \$50 and the rest they share equally. How much does each person get? *\\$ 75*

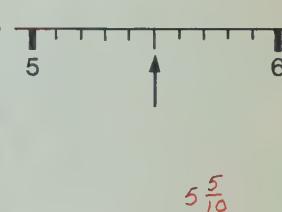
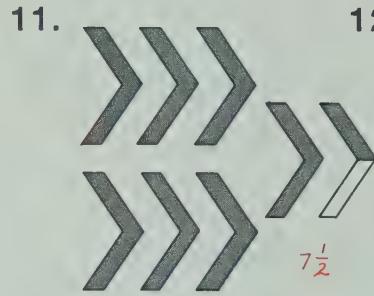
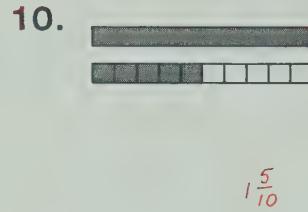
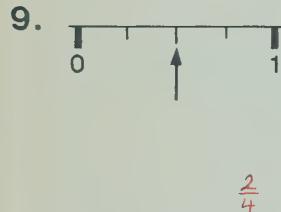
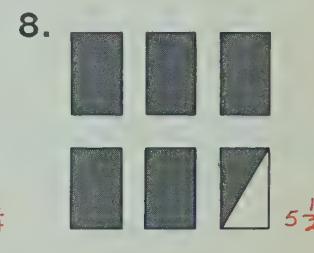
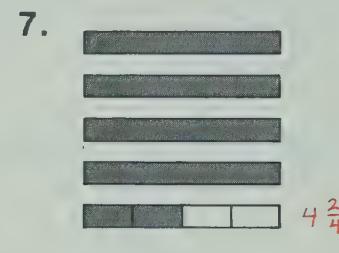
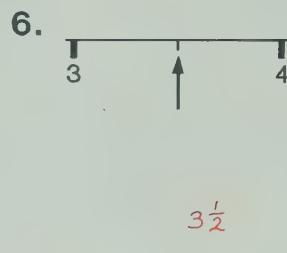
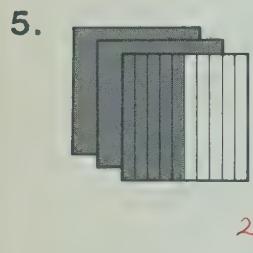
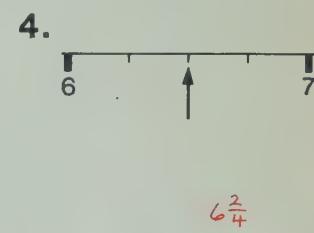
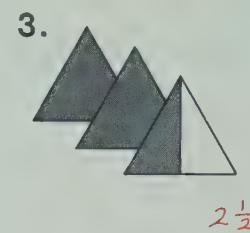
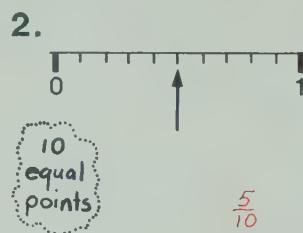
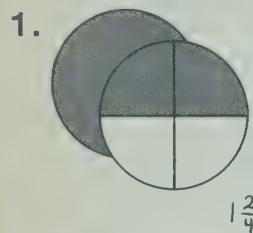
22. The first time the mouse went through the maze, it took 42.4 s. The tenth time through, it took 15.8 s. By how much had the mouse improved its time? *26.6 s*

NAME _____

SPM4/U13/295

Equivalent Fractions for One-Half

Use $\frac{1}{2}$, $\frac{2}{4}$, or $\frac{5}{10}$ to write the numeral that matches each picture best.



SPM4/U13/296

Decimal Names for One-Half

Write each of these as a decimal

showing tenths.

1. $3\frac{1}{2}$ 3.5

2. 3.50 3.5

3. $6\frac{1}{2}$ 6.5

4. 0.50 0.5

5. $\frac{1}{2}$ 0.5

showing hundredths.

6. $2\frac{1}{2}$ 2.50

7. 0.5 0.50

8. 1.5 1.50

9. $3\frac{1}{2}$ 3.50

10. $\frac{1}{2}$ 0.50

Write each of these using the fraction $\frac{1}{2}$.

11. 16.5 $16\frac{1}{2}$

12. 0.50 $\frac{1}{2}$

13. 4.5 $4\frac{1}{2}$

14. 1.50 $1\frac{1}{2}$

15. 9.50 $9\frac{1}{2}$

Fourths and Quarters

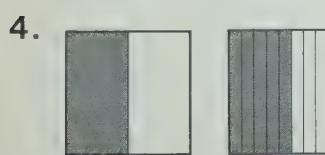
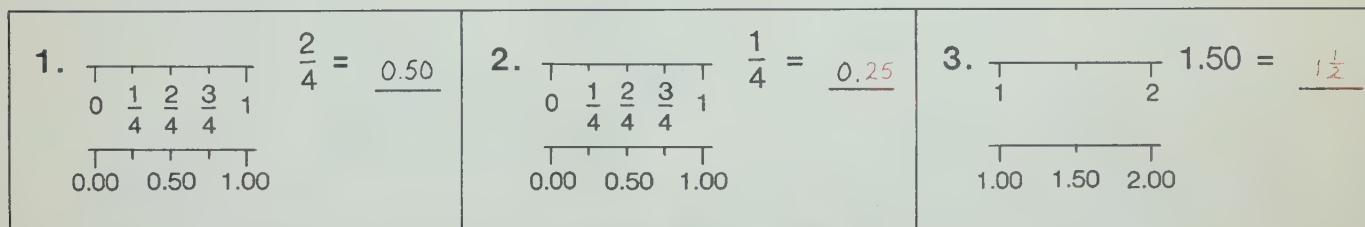
Complete each chart.

<u>dollars</u>	<u>quarters</u>	<u>value</u>	<u>dollars</u>	<u>quarters</u>	<u>value</u>	<u>dollars</u>	<u>quarters</u>	<u>value</u>			
1.	1	2	\$1.50	2.	2	1	\$2.25	3.	0	3	\$0.75
fraction (fourths) decimal			fraction (fourths) decimal			fraction (fourths) decimal					
4.	$1\frac{2}{4}$	1.50	5.	$3\frac{3}{4}$	3.75	6.	$\frac{1}{4}$	0.25			

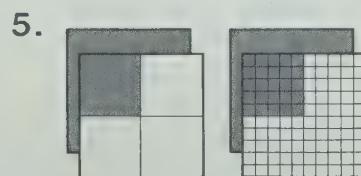
<u>dollars</u>	<u>quarters</u>	<u>value</u>	<u>dollars</u>	<u>quarters</u>	<u>value</u>	<u>dollars</u>	<u>quarters</u>	<u>value</u>			
7.	1	3	\$1.75	8.	—	1	\$0.25	9.	0	2	\$0.50
dollars quarters value			dollars quarters value			dollars quarters value					
10.	3	3	\$3.75	11.	1	1	\$1.25	12.	2	2	\$2.50
fraction (fourths) decimal			fraction (fourths) decimal			fraction (fourths) decimal					
13.	$2\frac{2}{4}$	2.50	14.	$\frac{3}{4}$	0.75	15.	$4\frac{1}{4}$	4.25			

Equivalent Fractions and Decimals

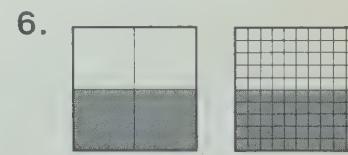
Write a decimal or fraction to complete each sentence.



$$\frac{1}{2} = \underline{0.5}$$



$$1\frac{1}{4} = \underline{1.25}$$



$$\frac{2}{4} = \underline{0.50}$$

$$7. 2\frac{3}{10} = \underline{2.3}$$

$$8. 1\frac{3}{4} = \underline{1.75}$$

$$9. 2.25 = \underline{2\frac{1}{4}}$$

$$10. 0.75 = \underline{\frac{3}{4}}$$

$$11. 6.50 = \underline{6\frac{1}{2}}$$

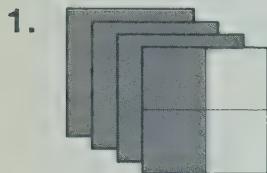
$$12. 0.5 = \underline{\frac{1}{2}}$$

$$13. 4\frac{1}{4} = \underline{4.25}$$

$$14. 4.75 = \underline{4\frac{3}{4}}$$

Practice

Use $\frac{1}{2}$, $\frac{2}{4}$, or $\frac{5}{10}$ to write the numeral that matches each picture best.

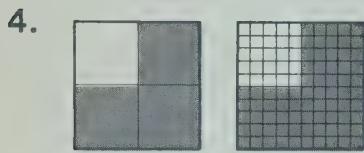


$$3\frac{2}{4}$$

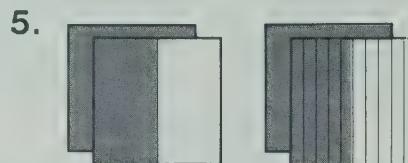


$$\frac{5}{10}$$

Write the decimal that matches the picture and completes the sentence.



$$\frac{3}{4} = \underline{0.75}$$



$$1\frac{1}{2} = \underline{1.5}$$

Write each of these as a decimal showing tenths.

$$6. 3\frac{1}{2} \quad \underline{3.5}$$

$$7. \frac{3}{10} \quad \underline{0.3}$$

$$8. 1\frac{6}{10} \quad \underline{1.6}$$

$$9. \frac{1}{2} \quad \underline{0.5}$$

Write each of these as a decimal showing hundredths.

$$10. 4\frac{1}{2} \quad \underline{4.50}$$

$$11. 1\frac{3}{4} \quad \underline{1.75}$$

$$12. 2.5 \quad \underline{2.50}$$

$$13. \frac{1}{4} \quad \underline{0.25}$$

Write a fraction to complete each sentence.

Use fourths or one-half when possible.

$$14. 5.50 = \underline{5\frac{1}{2}}$$

$$15. 3.25 = \underline{3\frac{1}{4}}$$

$$16. 0.9 = \underline{\frac{9}{10}}$$

$$17. 1.75 = \underline{1\frac{3}{4}}$$

$$18. \$0.50 \text{ is } \underline{\frac{1}{2}} \text{ the value of 1 dollar.}$$

$$19. \text{The value of 3 quarters is } \underline{\frac{3}{4}} \text{ the value of 1 dollar.}$$

Complete the chart.

Bills and Coins	Value
20. 2 dollars and 3 quarters	<u>\$2.75</u>
21. <u>1</u> dollar and <u>2</u> quarters	<u>\$1.50</u>
22. 3 dollars and 1 quarter	<u>\$3.25</u>
23. <u>0</u> dollars and <u>3</u> quarters	<u>\$0.75</u>
24. 5 dollars and 2 quarters	<u>\$5.50</u>
25. <u>2</u> dollars and <u>1</u> quarter	<u>\$2.25</u>

Comparing and Ordering Fractions

Use $>$ or $<$ to make a true statement.

0.50 0.10

1. $\frac{2}{4} \underline{\text{>}} \frac{1}{10}$

0.50 0.75

2. $\frac{1}{2} \underline{\text{<}} \frac{3}{4}$

3. $\frac{1}{4} \underline{\text{<}} \frac{1}{2}$

4. $\frac{6}{10} \underline{\text{<}} \frac{9}{10}$

5. $\frac{6}{10} \underline{\text{<}} \frac{3}{4}$

6. $\frac{1}{2} \underline{\text{<}} \frac{9}{10}$

7. $\frac{2}{4} \underline{\text{>}} \frac{2}{10}$

8. $\frac{3}{4} \underline{\text{>}} \frac{2}{4}$

9. $\frac{5}{10} \underline{\text{<}} \frac{3}{4}$

List in order from least to greatest.

10. $\frac{1}{2}, \frac{3}{4}, \frac{1}{4}, \frac{1}{10}$ $\frac{1}{10}, \frac{1}{4}, \frac{1}{2}, \frac{3}{4}$

11. $\frac{2}{4}, \frac{1}{10}, \frac{4}{10}, \frac{9}{10}$ $\frac{1}{10}, \frac{4}{10}, \frac{2}{4}, \frac{9}{10}$

12. $\frac{6}{10}, \frac{1}{2}, \frac{1}{4}, \frac{2}{10}$ $\frac{2}{10}, \frac{1}{4}, \frac{1}{2}, \frac{6}{10}$

13. $\frac{3}{4}, \frac{9}{10}, \frac{7}{10}, \frac{1}{2}$ $\frac{1}{2}, \frac{7}{10}, \frac{3}{4}, \frac{9}{10}$

Fraction Names for 1

Draw a shape for 1 *Shapes will vary.*

1. if  is $\frac{1}{4}$.

2. if  is $\frac{1}{4}$.

3. if  is $\frac{1}{10}$.

4. if  is $\frac{1}{2}$.

5. if  is $\frac{1}{4}$.

6. if  is $\frac{1}{10}$.

7. if  is $\frac{1}{4}$.

8. if  is $\frac{1}{2}$.

9. if  is $\frac{1}{4}$.

Adding Fractions

Add. Check by using decimals.

1. $1\frac{2}{10} + 3\frac{7}{10}$	1.2 3.7 $\underline{-}$ $4\frac{9}{10}$	2. $2\frac{1}{2} + 3\frac{1}{2}$	2.5 3.5 $\underline{-}$ 6	3. $3\frac{2}{4}$	$5\frac{1}{4}$	4. $2 + 2\frac{1}{4}$	$4\frac{1}{4}$
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5. $\frac{1}{4} + \frac{2}{4}$	6. $1\frac{3}{10} + 4\frac{7}{10}$	7. $5\frac{1}{2} - \frac{2}{7\frac{1}{2}}$	8. $2\frac{5}{10} - 4\frac{1}{10}$	9. $2\frac{1}{4} - \frac{6}{4}$
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10. $6 + 1\frac{3}{4}$	11. $8\frac{1}{10} + 4\frac{2}{10}$	12. $\frac{1}{2} + \frac{1}{2}$
------------------------	-------------------------------------	---------------------------------

13. $7\frac{8}{10} + 3\frac{2}{10}$ (or $10\frac{10}{10}$)	14. $2\frac{5}{10} + 1\frac{5}{10}$ (or $3\frac{10}{10}$)	15. $4\frac{3}{4} + 3\frac{1}{4}$ (or $7\frac{4}{4}$)
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Subtracting Fractions

Subtract. Check by using decimals.

1. $6\frac{4}{10} - 3\frac{1}{10}$	6.4 3.1 $\underline{-}$ $3\frac{3}{10}$	2. $6 - 4\frac{3}{10}$	6.0 4.3 $\underline{-}$ $1\frac{7}{10}$	3. $6\frac{2}{10} - 1\frac{1}{10}$	$5\frac{1}{10}$	4. $5\frac{2}{4} - 1\frac{1}{4}$	$4\frac{1}{4}$
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5. $6 - 5\frac{3}{4}$	6. $8\frac{8}{10} - 3\frac{3}{10}$	7. $2 - \frac{6}{10}$	8. $3\frac{3}{4} - \frac{1}{2\frac{3}{4}}$	9. $2\frac{1}{2} - \frac{1}{2}$
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10. $5\frac{9}{10} - 4\frac{1}{10}$	11. $6\frac{3}{4} - 2\frac{1}{4}$	12. $6 - 1\frac{1}{4}$
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13. $4\frac{3}{10} - 3\frac{3}{10}$	14. $4 - \frac{1}{2}$	15. $7 - 5\frac{5}{10}$
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Practice

Perform the indicated operation.

$$\begin{array}{r} 3\frac{1}{4} \\ + 2\frac{2}{4} \\ \hline 5\frac{3}{4} \end{array}$$

$$\begin{array}{r} \$4.37 \\ \times \quad 8 \\ \hline \$34.96 \end{array}$$

$$357 \overline{)7^{\textcolor{red}{51}}}$$

$$\begin{array}{r} 4\frac{7}{10} \\ - 1\frac{3}{10} \\ \hline 3\frac{4}{10} \end{array}$$

$$\begin{array}{r} 63.21 \\ + 19.48 \\ \hline 82.69 \end{array}$$

$$\begin{array}{r} 3.9 \\ \times \quad 5 \\ \hline 19.5 \end{array}$$

$$\begin{array}{r} 5 \\ - 3\frac{1}{2} \\ \hline 1\frac{1}{2} \end{array}$$

$$915 \overline{)3^{\textcolor{red}{\$305}}}$$

$$\begin{array}{r} 462 \\ \times \quad 33 \\ \hline 15246 \end{array}$$

$$\begin{array}{r} \$14.86 \\ - \quad 7.93 \\ \hline \$ \quad 6.93 \end{array}$$

$$11. \quad \begin{array}{r} 3\frac{3}{10} + 6\frac{2}{10} \\ \textcolor{red}{+ 0\frac{5}{10}} \\ \hline \end{array}$$

$$12. \quad 279 \div 9 \qquad \qquad \qquad \textcolor{red}{31}$$

$$13. \quad 406 - 27 \qquad \qquad \qquad \textcolor{red}{379}$$

$$14. \quad (314 - 281) \times 35 \qquad \textcolor{red}{1155}$$

$$15. \quad 14 \times \$8.06 \qquad \qquad \qquad \textcolor{red}{\$112.84}$$

$$16. \quad 614 + 28 + 1914 \qquad \qquad \qquad \textcolor{red}{2556}$$

Solve. Show your work.

17. Mr. Derrin's garden is 8 m wide and 14 m long. How many metres of fence will be needed to go around it? $\textcolor{red}{44}$

18. A tweed material Mrs. Brun likes costs \$12 per square metre. She needs 2.6 m². How much will this cost? $\textcolor{red}{\$31.20}$

19. Mill Village has 3 mail routes. One has 128 boxes. Another has 273 boxes. The third has 185 boxes. Altogether, how many mail boxes are there in Mill Village? $\textcolor{red}{586}$

20. Pauline is deciding between a 10-speed and a 5-speed bicycle. The 10-speed costs \$136.65. The 5-speed is \$41.95 less. How much does the 5-speed bicycle cost? $\textcolor{red}{\$94.70}$

21. 645 copies of the school newspaper are to be divided equally among 3 locations. How many will each have? $\textcolor{red}{215}$

22. The feedstore has a stack of 180 bags of feed. Each bag holds 25 kg. How many kilograms of feed are there in all? $\textcolor{red}{4500 \text{ kg}}$

Checking Up -- Addition, Subtraction, Multiplication

Perform the indicated operation.

1.
$$\begin{array}{r} 53 \\ + 24 \\ \hline 77 \end{array}$$

2.
$$\begin{array}{r} 957 \\ - 642 \\ \hline 315 \end{array}$$

3.
$$\begin{array}{r} 60 \\ \times 3 \\ \hline 180 \end{array}$$

4.
$$\begin{array}{r} 63 \\ - 38 \\ \hline 25 \end{array}$$

5.
$$\begin{array}{r} 36 \\ \times 8 \\ \hline 288 \end{array}$$

6.
$$\begin{array}{r} 467 \\ + 371 \\ \hline 838 \end{array}$$

7.
$$\begin{array}{r} 670 \\ - 276 \\ \hline 394 \end{array}$$

8.
$$\begin{array}{r} 85 \\ \times 5 \\ \hline 425 \end{array}$$

9.
$$\begin{array}{r} 359 \\ + 168 \\ \hline 527 \end{array}$$

10.
$$\begin{array}{r} 900 \\ - 472 \\ \hline 428 \end{array}$$

11.
$$\begin{array}{r} 400 \\ \times 9 \\ \hline 3600 \end{array}$$

12.
$$\begin{array}{r} 1274 \\ + 1789 \\ \hline 3063 \end{array}$$

13.
$$\begin{array}{r} 748 \\ \times 7 \\ \hline 5236 \end{array}$$

14.
$$\begin{array}{r} 6614 \\ - 1936 \\ \hline 4678 \end{array}$$

15.
$$\begin{array}{r} 27 \\ \times 60 \\ \hline 1620 \end{array}$$

16.
$$\begin{array}{r} \$6.84 \\ + 5.17 \\ \hline \$12.01 \end{array}$$

17.
$$\begin{array}{r} \$2.85 \\ \times 4 \\ \hline \$11.40 \end{array}$$

18.
$$\begin{array}{r} \$17.32 \\ - 8.37 \\ \hline \$ 8.95 \end{array}$$

19.
$$\begin{array}{r} \$46.00 \\ - 36.84 \\ \hline \$ 9.16 \end{array}$$

20.
$$\begin{array}{r} \$28.57 \\ + 44.96 \\ \hline \$73.53 \end{array}$$

21.
$$\begin{array}{r} 47 \\ \times 58 \\ \hline 2726 \end{array}$$

22.
$$\begin{array}{r} 39.5 \\ + 57.5 \\ \hline 97.0 \end{array}$$

23.
$$\begin{array}{r} 1425 \\ 938 \\ + 2647 \\ \hline 5010 \end{array}$$

24.
$$\begin{array}{r} 20.2 \\ - 1.9 \\ \hline 18.3 \end{array}$$

25.
$$\begin{array}{r} 297 \\ \times 39 \\ \hline 11583 \end{array}$$

Solve. Show your work.

26. Hayley's Store ordered 75 cartons of sugar with 8 bags in each carton. How many bags of sugar did it order? **600**

27. The Fire Department reported 2032 calls for the year, of which 475 were false alarms. How many calls were not false alarms? **1557**

28. Meredith paid \$32.50, \$26.75, and \$19.45 to the three part-time helpers. How much did she pay the part-time helpers in all? **\$78.70**

29. The building plans show 24 groups of new houses with 16 houses in each group. How many new houses do the building plans show? **384**

Checking Up -- Computation

Perform the indicated operation.

1.
$$\begin{array}{r} 513 \\ + 145 \\ \hline 658 \end{array}$$

2.
$$\begin{array}{r} 84 \\ \times 6 \\ \hline 504 \end{array}$$

3.
$$\begin{array}{r} 213 \\ 3 \sqrt{639} \\ \hline \end{array}$$

4.
$$\begin{array}{r} 698 \\ - 462 \\ \hline 236 \end{array}$$

5.
$$\begin{array}{r} 748 \\ \times 3 \\ \hline 2244 \end{array}$$

6.
$$\begin{array}{r} 3864 \\ + 769 \\ \hline 4633 \end{array}$$

7.
$$\begin{array}{r} 23 \\ 4 \sqrt{92} \\ \hline \end{array}$$

8.
$$\begin{array}{r} 25.9 \\ \times 8 \\ \hline 207.2 \end{array}$$

9.
$$\begin{array}{r} \$67.59 \\ + 24.89 \\ \hline \$92.48 \end{array}$$

10.
$$\begin{array}{r} 2000 \\ - 1571 \\ \hline 429 \end{array}$$

11.
$$\begin{array}{r} 96 \\ \times 70 \\ \hline 6720 \end{array}$$

12.
$$\begin{array}{r} 336.2 \\ - 86.9 \\ \hline 249.3 \end{array}$$

13.
$$\begin{array}{r} \$6.98 \\ \times 5 \\ \hline \$34.90 \end{array}$$

14.
$$\begin{array}{r} 36 \\ 7 \sqrt{252} \\ \hline \end{array}$$

15.
$$\begin{array}{r} 75 \\ \times 94 \\ \hline 7050 \end{array}$$

16.
$$\begin{array}{r} \$90.63 - \$53.96 \\ \$36.67 \end{array}$$

17.
$$\begin{array}{r} 162 \div 6 \\ 27 \end{array}$$

18.
$$\begin{array}{r} 6 \times 6 \times 7 \\ 252 \end{array}$$

19.
$$\begin{array}{r} 528 \div 8 \\ 66 \end{array}$$

20.
$$\begin{array}{r} 74 \times 375 \\ 27750 \end{array}$$

21.
$$\begin{array}{r} 420.7 + 82.3 + 99.2 \\ 602.2 \end{array}$$

Solve. Show your work.

 22. Phillip paid the \$12.99 bill with a \$20 bill. How much change did he receive? $\$7.01$

 23. Laurie placed 125 apples in 5 bags with the same number in each bag. How many were in each bag? 25

 24. Ted filled 38 cartons with two dozen eggs each. How many eggs were in the cartons? 912

 25. The grocery items cost \$2.89, \$0.77, and \$3.89. How much did the three items cost in all? $\$7.55$

Checking Up -- Numeration

Write in standard form.

1. sixty-nine thousand forty-one **69 041**2. seven and five-eighths **$7\frac{5}{8}$** 3. $70\ 000 + 800 + 20$ **70 820**4. forty-eight and seventy-five hundredths
48.755. three-fifths **$\frac{3}{5}$** 6. two and eight-hundredths
2.08Use $>$, $<$, or $=$ to make a true statement.7. $77\ 535 \underline{>} 77\ 355$ 8. $206\ 370 \underline{<} 263\ 070$ 9. $689\ 768 \underline{<} 689\ 786$ 10. $4.3 \underline{=} 4.30$ 11. $17.08 \underline{<} 17.74$ 12. $29.3 \underline{>} 29.2$ 13. $\frac{1}{2} \underline{<} \frac{2}{3}$ 14. $1 \underline{=} \frac{5}{5}$ 15. $\frac{3}{4} \underline{<} 0.76$

List in order from least to greatest.

16. 3.85, 3.08, 3.50, 38.5, 3.58, 3.80 **3.08, 3.50, 3.58, 3.80, 3.85, 38.5**17. $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{2}{3}, \frac{3}{4}, \frac{2}{5}, \frac{3}{5}, \frac{4}{5}$ **$\frac{1}{5}, \frac{1}{4}, \frac{1}{3}, \frac{2}{5}, \frac{1}{2}, \frac{3}{5}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}$** 18. 108 909, 180 980, 108 908, 109 801, 108 918, 108 009
108 009, 108 908, 108 909, 108 918, 109 801, 180 980

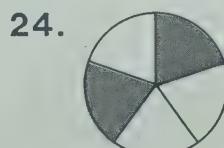
Round to the

19. nearest ten: 3675 **3680**20. nearest thousand: 29 704 **30 000**21. nearest hundred: 6845 **6800**22. nearest whole number: 23.18 **23**

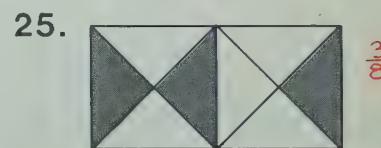
Write a fraction to show how much is shaded.



$$\frac{7}{10}$$

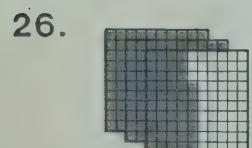


$$\frac{3}{5}$$

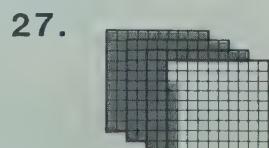


$$\frac{5}{8}$$

Write a decimal to show how much is shaded.



$$2.47$$



$$3.08$$



$$1.92$$

Checking Up -- Measurement

Complete.

1. $2 \text{ km} = \underline{2000} \text{ m}$

2. $128 \text{ cm} = \underline{1} \text{ m } \underline{28} \text{ cm}$

3. $2 \text{ L } 89 \text{ mL} = \underline{2089} \text{ mL}$

4. $6280 \text{ mL} = \underline{6} \text{ L } \underline{280} \text{ mL}$

5. $3000 \text{ g} = \underline{3} \text{ kg}$

6. $1 \text{ kg } 14 \text{ g} = \underline{1014} \text{ g}$

7. $4 \text{ m} = \underline{400} \text{ cm}$

8. $1 \text{ h } 10 \text{ min} = \underline{70} \text{ min}$

9. $4 \text{ min } 20 \text{ s} = \underline{260} \text{ s}$

10. 1 dollar 12 dimes are worth \$ 2.20.

11. 3 dollars 5 dimes 17 pennies are worth \$ 3.67.12. 2 dollars 18 dimes 15 pennies are worth \$ 3.95.

Which unit of length, the millimetre, the centimetre, the metre, or the kilometre is best for measuring

13. the length of a newborn baby? centimetre 14. the width of a baby's fingernail? millimetre15. the distance from your home to the centre of town? kilometre16. the width of a road? metre

Choose the best estimate for

17. the mass of a pigeon.

18. the width of a dime.

19. the capacity of a thimble.

1 g, 1 kg, 10 kg

1 kg

2 mm, 2 cm, 2 m

2 cm

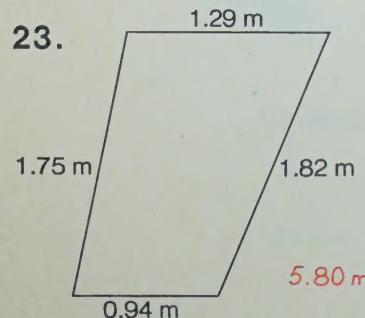
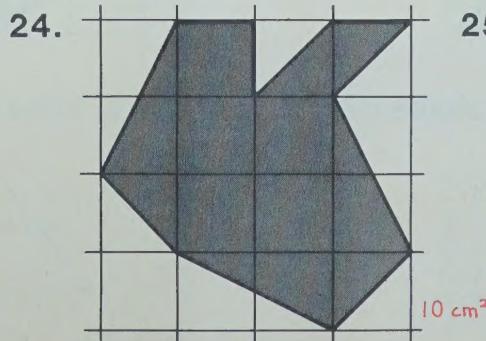
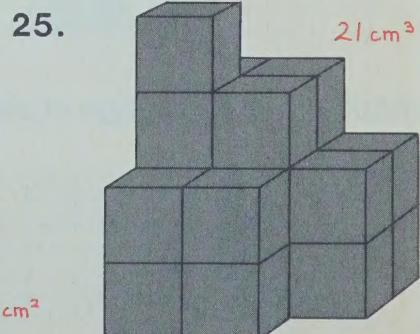
2 L, 20 mL, 2 mL

2 mL

Complete.

20. The mass of my pencil is about 15 g.21. The school doorway is about 3 m tall.22. The orange juice pitcher holds about 2 L of juice.

Find the perimeter.

Give the area
in square centimetres.Give the volume
in cubic centimetres.

NAME _____

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 STARTING POINTS IN MATHEMATICS/
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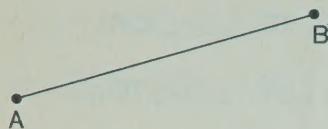
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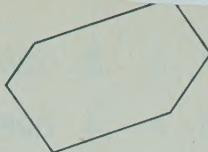
Checking Up -- Geometry

Complete each sentence.

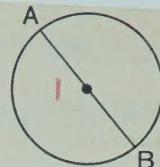
1.



2.



3.

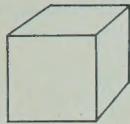


\overline{AB} is
a line segment.

This polygon
is a hexagon.

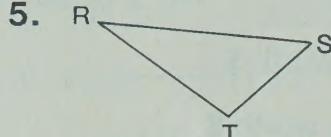
\overline{AB} is a diameter
of the circle.

4.

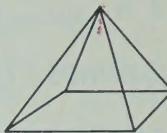


A cube has 6 faces.
Each has
the shape of a square.

5.



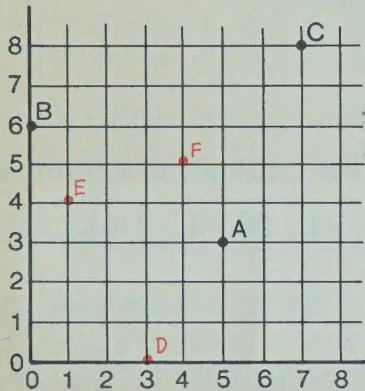
6.



A name for this
triangle is triangle RST.

This pyramid has
8 edges and
5 vertices.

Use the grid for Exercises 7-12. Write a number pair for

7. point A. (5, 3)8. point B. (0, 6)9. point C. (7, 8)

Show on the grid the point named by

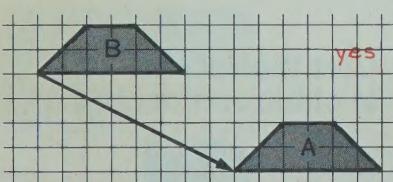
10. (3, 0). Call it D.

11. (1, 4). Call it E.

12. (4, 5). Call it F.

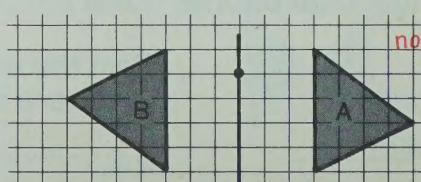
Is shape A the slide image of shape B?

13.



yes

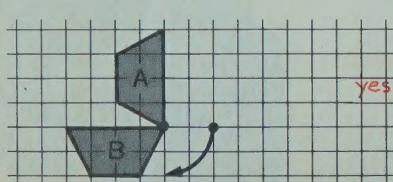
14.



no

Is shape A the turn image of shape B?

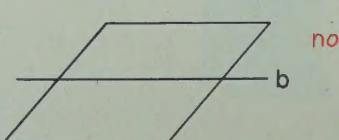
15.



yes

Is line b a line of symmetry?

16.



no

For a lesson like the one shown, have students who exhibit difficulty in understanding the material in the textbook proceed through the *diagnostic/instruction box* using the *completely-worked example* for review. Go over the example with students individually. Have them verbalize their understanding of the process involved. Then have them proceed through a solution of the *partially-worked example* while you watch and listen. Check their understanding by having them complete the *decision exercises* in the diagnostic/instruction box on their own. Use their performance on these exercises as a basis for deciding whether they have grasped the required concept or skill to continue on the remaining exercises, or whether more help is necessary such as that provided in the *Starting Points in Mathematics Reteaching Blackline Masters*.

One diagnostic/instruction box is provided with every lesson that relates to a textbook lesson. A completely-worked example is a feature in most of these boxes. When the task requires a rather "large" response, however, such as in the creation of a graph, the first exercise may be only partially complete. After discussing the work shown for such an exercise, have the students complete the exercise for a check of their understanding while you watch and listen.

For some lessons, such as those which develop concepts rather than skills, there may be no partially-worked example following the first completed example. For such lessons the student simply proceeds to the other exercises in the diagnostic/instruction box following your initial review with them of the worked example and their verbalization of the concepts involved. For these exercises, you may wish to have them justify their responses verbally as they proceed while you listen and watch.

Space for student answers is provided after or below each exercise. This positioning is usually suggested by what is shown in the worked examples.

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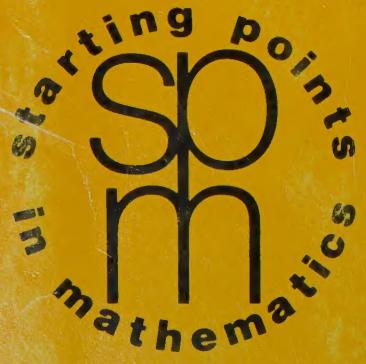
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